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FILE 'HOME' ENTERED AT 15:31:08 ON 12 MAY 2003

=> file reg
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.42       0.42

FILE 'REGISTRY' ENTERED AT 15:32:02 ON 12 MAY 2003
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   11 MAY 2003  HIGHEST RN 514167-89-6
DICTIONARY FILE UPDATES:  11 MAY 2003  HIGHEST RN 514167-89-6

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> e linoleic acid/cn
E1            1     LINOLEATE ISOMERASE/CN
E2            1     LINOLEATE PEROXYL RADICAL/CN
E3            1 --> LINOLEIC ACID/CN
E4            1     LINOLEIC ACID (D(-)-), (2,2-DIMETHYL-1,3-DIOXOLAN-4-YL)METHY
                    L ESTER/CN
E5            1     LINOLEIC ACID (L(-)-), 2-HYDROXY-3-(TRILYLOXY)PROPYL ESTER/C
                    N
E6            1     LINOLEIC ACID .OMEGA.-6 LIPOXYGENASE/CN
E7            1     LINOLEIC ACID 1-(2-NAPHTHYL)ETHYL ESTER/CN
E8            1     LINOLEIC ACID 1-NAPHTHYLMETHYL ESTER/CN
E9            1     LINOLEIC ACID 10-HYDROPEROXIDE/CN
E10           1     LINOLEIC ACID 12-HYDROPEROXIDE/CN
E11           1     LINOLEIC ACID 13(S)-HYDROPEROXIDE/CN
E12           2     LINOLEIC ACID 13-HYDROPEROXIDE/CN

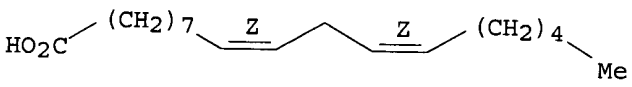
=> s e3
L1            1 "LINOLEIC ACID"/CN

=> d l1

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   60-33-3  REGISTRY
CN   9,12-Octadecadienoic acid (9Z,12Z)- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   9,12-Octadecadienoic acid (Z,Z)-
CN   Linoleic acid (8CI)
OTHER NAMES:
CN   (Z,Z)-9,12-Octadecadienoic acid
CN   .alpha.-Linoleic acid
CN   9,12-Octadecadienoic acid, (Z,Z)-
CN   9-cis,12-cis-Linoleic acid
```

CN 9Z,12Z-Linoleic acid
CN 9Z,12Z-Octadecadienoic acid
CN 9Z,12Z-Octadecadienoic acid
CN all-cis-9,12-Octadecadienoic acid
CN cis,cis-Linoleic acid
CN cis-.DELTA.9,12-Octadecadienoic acid
CN cis-9,cis-12-Octadecadienoic acid
CN Emersol 315
CN Extra Linoleic 90
CN Linolic acid
CN Polylin 515
CN Unifac 6550
FS STEREOSEARCH
MF C18 H32 O2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TULSA, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

28418 REFERENCES IN FILE CA (1957 TO DATE)
1185 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
28454 REFERENCES IN FILE CAPLUS (1957 TO DATE)
10 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

```
=> e linolenic acid/cn
E1            1     LINOLENATE 2(R)-LIPOXYGENASE/CN
E2            1     LINOLENELAIDIC ACID/CN
E3            1 --> LINOLENIC ACID/CN
E4            1     LINOLENIC ACID 13-HYDROPEROXIDE/CN
E5            1     LINOLENIC ACID 9-HYDROPEROXIDE/CN
E6            1     LINOLENIC ACID AMINOMETHYLPROPANOL SALT/CN
E7            1     LINOLENIC ACID ANILIDE/CN
E8            1     LINOLENIC ACID CHLORIDE/CN
E9            1     LINOLENIC ACID DIETHANOLAMIDE/CN
E10           1     LINOLENIC ACID GLYCERIDE/CN
E11           1     LINOLENIC ACID GLYCIDYL ESTER/CN
E12           1     LINOLENIC ACID HYDROPEROXIDE/CN

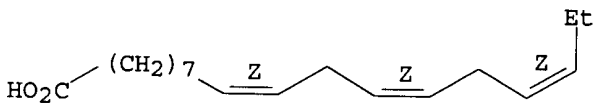
=> s e3
L2            1 "LINOLENIC ACID"/CN

=> d l2

L2   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   463-40-1  REGISTRY
CN   9,12,15-Octadecatrienoic acid, (9Z,12Z,15Z)- (9CI)   (CA INDEX NAME)
```

OTHER CA INDEX NAMES:
CN 9,12,15-Octadecatrienoic acid, (Z,Z,Z)-
CN **Linolenic acid (8CI)**
OTHER NAMES:
CN (all-Z)-9,12,15-Octadecatrienoic acid
CN (Z,Z,Z)-Octadeca-9,12,15-trienoic acid
CN .alpha.-Linolenic acid
CN 9,12,15-all-cis-Octadecatrienoic acid
CN 9-cis,12-cis,15-cis-Octadecatrienoic acid
CN 9Z,12Z,15Z-Octadecatrienoic acid
CN all-cis-9,12,15-Octadecatrienoic acid
CN cis,cis,cis-9,12,15-Octadecatrienoic acid
CN cis-.DELTA.9,12,15-Octadecatrienoic acid
CN cis-9,cis-12,cis-15-Octadecatrienoic acid
FS STEREOSEARCH
MF C18 H30 O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DIPPR*, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, SPECINFO, TOXCENTER, TULSA, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

14746 REFERENCES IN FILE CA (1957 TO DATE)
412 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
14763 REFERENCES IN FILE CAPLUS (1957 TO DATE)
4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

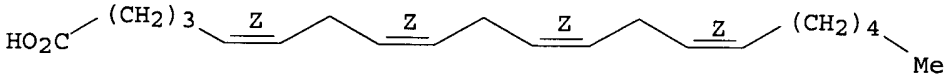
=> e arachidonic acid/cn
E1 1 ARACHIDONATE-SPECIFIC PHOSPHOLIPASE A2/CN
E2 1 ARACHIDONIC 5-LIPOXYGENASE/CN
E3 1 --> ARACHIDONIC ACID/CN
E4 1 ARACHIDONIC ACID (N,2,2-3H)ETHANOLAMIDE/CN
E5 1 ARACHIDONIC ACID .OMEGA.-1 HYDROXYLASE (MOUSE STRAIN C57BL/6 J CLONE WQ2J9-7 GENE CYP2J9)/CN
E6 1 ARACHIDONIC ACID .OMEGA.-1-HYDROXYLASE/CN
E7 1 ARACHIDONIC ACID .OMEGA.-HYDROXYLASE/CN
E8 1 ARACHIDONIC ACID 12S-LIPOXYGENASE/CN
E9 1 ARACHIDONIC ACID 15-LIPOXYGENASE/CN
E10 1 ARACHIDONIC ACID 18(R)-HYDROXYLASE/CN
E11 1 ARACHIDONIC ACID 5-LIPOXYGENASE/CN
E12 1 ARACHIDONIC ACID ANHYDRIDE/CN

=> s e3
L3 1 "ARACHIDONIC ACID"/CN

=> d l3

L3 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
RN 506-32-1 REGISTRY
CN 5,8,11,14-Eicosatetraenoic acid, (5Z,8Z,11Z,14Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,8,11,14-Eicosatetraenoic acid, (all-Z)- (8CI)
OTHER NAMES:
CN (all-Z)-5,8,11,14-Eicosatetraenoic acid
CN 5,8,11,14-all-cis-Eicosatetraenoic acid
CN 5-cis,8-cis,11-cis,14-cis-Eicosatetraenoic acid
CN 5Z,8Z,11Z,14Z-Eicosatetraenoic acid
CN all-cis-5,8,11,14-Eicosatetraenoic acid
CN arachidonate
CN **Arachidonic acid**
CN cis-.DELTA.5,8,11,14-Eicosatetraenoic acid
FS STEREOSEARCH
DR 10417-93-3, 929-92-0
MF C20 H32 O2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

25817 REFERENCES IN FILE CA (1957 TO DATE)
2187 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
25852 REFERENCES IN FILE CAPLUS (1957 TO DATE)
132 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus, uspatfull, wpids, biosis,drugu, medline

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	18.90	19.32

FILE 'CAPLUS' ENTERED AT 15:33:40 ON 12 MAY 2003
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FILE 'USPATFULL' ENTERED AT 15:33:40 ON 12 MAY 2003
CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIDS' ENTERED AT 15:33:40 ON 12 MAY 2003
COPYRIGHT (C) 2003 THOMSON DERWENT

FILE 'BIOSIS' ENTERED AT 15:33:40 ON 12 MAY 2003
COPYRIGHT (C) 2003 BIOLOGICAL ABSTRACTS INC.(R)

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FILE 'DRUGU' ENTERED AT 15:33:40 ON 12 MAY 2003
COPYRIGHT (C) 2003 THOMSON DERWENT

FILE 'MEDLINE' ENTERED AT 15:33:40 ON 12 MAY 2003

=> s l1
L4        39128 L1

=> s l2
L5        19968 L2

=> s l3
L6        65508 L3

=> s l4 or linole#####
L7       124477 L4 OR LINOLE#####

=> s l5 or linole#####
L8       121775 L5 OR LINOLE#####

=> s l6 or arachidon#####
L9       132806 L6 OR ARACHIDON#####

=> s (AD or alzheimer####)
L10      912077 (AD OR ALZHEIMER####)

=> s (cognit####)(6a)(disease## or dysfunction#####))
UNMATCHED RIGHT PARENTHESIS 'TION#####))'
The number of right parentheses in a query must be equal to the
number of left parentheses.

=> s ((cognit####)(6a)(disease## or dysfunction#####))
   4 FILES SEARCHED...
L11      14880 ((COGNIT####)(6A)(DISEASE## OR DYSFUNCTION#####))

=> s l11 or l10
L12     919904 L11 OR L10

=> s l12 and l7
L13       4577 L12 AND L7

=> s l12 and l8
L14       4559 L12 AND L8

=> s l12 and l9
L15       4697 L12 AND L9

=> s cholin### and l13
L16        536 CHOLIN### AND L13

=> s cholin### and l14
L17        536 CHOLIN### AND L14

=> s cholin### and l15
L18        618 CHOLIN### AND L15

=> s cytidin### and l16
L19         57 CYTIDIN### AND L16

=> s cytidin### and l17
L20         57 CYTIDIN### AND L17

=> s cytidin### and l18
```

```
L21          51 CYTIDIN### AND L18

=> s uridin#### and l13
L22         218 URIDIN#### AND L13

=> s uridin#### and l14
L23         218 URIDIN#### AND L14

=> s uridin#### and l15
L24         250 URIDIN#### AND L15

=> s l19 or l20  or l21
L25          65 L19 OR L20 OR L21

=> s l22 or l23 or l24
L26         272 L22 OR L23 OR L24

=> s citicolin### and l25
L27           4 CITICOLIN### AND L25

=> s citicolin### and l26
L28           1 CITICOLIN### AND L26

=> s l26 and AD
L29         168 L26 AND AD

=> s l29 and alzheimer####
L30         122 L29 AND ALZHEIMER####

=> s l30 and memory
L31         114 L30 AND MEMORY

=> s l31 and cognitiv##
L32         113 L31 AND COGNITIV##

=> dup remove l32
PROCESSING COMPLETED FOR L32
L33          113 DUP REMOVE L32 (0 DUPLICATES REMOVED)

=> s l27 or l28
L34           4 L27 OR L28

=> d l34 1-4 bib,ab

L34  ANSWER 1 OF 4  USPATFULL
AN      2002:48595  USPATFULL
TI      METHODS FOR INCREASING CYTIDINE LEVELS IN VIVO ANDTREATING
        CYTIDINE-DEPENDENT HUMAN DISEASES
IN      WATKINS, CAROL, CAMBRIDGE, MA, UNITED STATES
        WURTMAN, RICHARD J., BOSTON, MA, UNITED STATES
PI      US 2002028787       A1   20020307
AI      US 1999-363748      A1   19990730 (9)
PRAI    US 1998-95002P       19980731 (60)
DT      Utility
FS      APPLICATION
LREP    PATENT ADMINSTRATOR, KATTEN MUCHIN ZAVIS, SUITE 1600, 525 WEST MONROE
        STREET, CHICAGO, IL, 60661
CLMN    Number of Claims: 38
ECL     Exemplary Claim: 1
DRWN    3 Drawing Page(s)
LN.CNT 612
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      Methods of treating certain neurological diseases using exogenous
        uridine or a uridine source alone as a precursor of
```

endogenous **cytidine**, particularly in the human brain, are disclosed. Methods are also disclosed wherein exogenous **uridine** or a **uridine** source is combined either with drugs increasing **uridine** availability or with compounds that serve as a source of **choline** in phospholipid synthesis.

L34 ANSWER 2 OF 4 USPATFULL
AN 2000:161049 USPATFULL
TI **Choline** compositions and uses thereof
IN Shashoua, Victor E., Belmont, MA, United States
PA Protarga, Inc., Conshohocken, PA, United States (U.S. corporation)
PI US 6153653 20001128
AI US 1997-979313 19971126 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Spivack, Phyllis G.
LREP Wolf, Greenfield & Sacks, PC
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 702
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides compositions that include conjugates of **choline** and a fatty acid, preferably cis-docosahexaenoic acid. The conjugates are useful in treating disorders resulting from cerebral ischemia including stroke.

L34 ANSWER 3 OF 4 USPATFULL
AN 1999:137323 USPATFULL
TI Cholinergic compositions and uses thereof
IN Bradley, Matthews O., Laytonsville, MD, United States
Shashoua, Victor E., Belmont, MA, United States
Swindell, Charles S., Merion, PA, United States
Webb, Nigel L., Bryn Mawr, PA, United States
PA Neuromedica, Inc., Conshohocken, PA, United States (U.S. corporation)
PI US 5977174 19991102
AI US 1997-978540 19971126 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Reamer, James H.
LREP Wolf, Greenfield & Sacks, P.C.
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 733
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides compositions that include conjugates of a cholinergic agent and a fatty acid, preferably cis-docosahexaenoic acid. The conjugates are useful in treating disorders resulting from cerebral ischemia including stroke.

L34 ANSWER 4 OF 4 USPATFULL
AN 1998:104731 USPATFULL
TI Method of protecting brain tissue from cerebral infarction subsequent to ischemia
IN Sandage, Bobby Winston, Acton, MA, United States
Fisher, Marc, Shrewsbury, MA, United States
Locke, Kenneth Walter, Littleton, MA, United States
PA Interneuron Pharmaceuticals, Inc., Lexington, MA, United States (U.S. corporation)
PI US 5801160 19980901
AI US 1997-820244 19970318 (8)
RLI Continuation of Ser. No. US 1995-399262, filed on 6 Mar 1995, now abandoned

```
DT      Utility
FS      Granted
EXNAM   Primary Examiner: Cintins, Marianne M.; Assistant Examiner: Moezie, M.
LREP    Lowe, Price, LeBlanc & Becker
CLMN    Number of Claims: 11
ECL     Exemplary Claim: 1
DRWN    1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 497
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB      Methods and pharmaceutical compositions for reducing the extent of
        infarction, particularly cerebral infarction subsequent to cerebral
        ischemia.


=> d his

     (FILE 'HOME' ENTERED AT 15:31:08 ON 12 MAY 2003)

     FILE 'REGISTRY' ENTERED AT 15:32:02 ON 12 MAY 2003
                E LINOLEIC ACID/CN
L1            1 S E3
                E LINOLENIC ACID/CN
L2            1 S E3
                E ARACHIDONIC ACID/CN
L3            1 S E3

     FILE 'CAPLUS, USPATFULL, WPIDS, BIOSIS, DRUGU, MEDLINE' ENTERED AT
     15:33:40 ON 12 MAY 2003
L4        39128 S L1
L5        19968 S L2
L6        65508 S L3
L7       124477 S L4 OR LINOLE#####
L8       121775 S L5 OR LINOLE#####
L9       132806 S L6 OR ARACHIDON#####
L10      912077 S (AD OR ALZHEIMER####)
L11       14880 S ((COGNIT####)(6A)(DISEASE## OR DYSFUNCTION#####))
L12      919904 S L11 OR L10
L13        4577 S L12 AND L7
L14        4559 S L12 AND L8
L15        4697 S L12 AND L9
L16         536 S CHOLIN### AND L13
L17         536 S CHOLIN### AND L14
L18         618 S CHOLIN### AND L15
L19          57 S CYTIDIN### AND L16
L20          57 S CYTIDIN### AND L17
L21          51 S CYTIDIN### AND L18
L22         218 S URIDIN#### AND L13
L23         218 S URIDIN#### AND L14
L24         250 S URIDIN#### AND L15
L25          65 S L19 OR L20   OR L21
L26         272 S L22 OR L23 OR L24
L27           4 S CITICOLIN### AND L25
L28           1 S CITICOLIN### AND L26
L29         168 S L26 AND AD
L30         122 S L29 AND ALZHEIMER####
L31         114 S L30 AND MEMORY
L32         113 S L31 AND COGNITIV##
L33         113 DUP REMOVE L32 (0 DUPLICATES REMOVED)
L34           4 S L27 OR L28

=> d l33 105-113 bib,ab

L33  ANSWER 105 OF 113  USPATFULL
AN     2002:43187  USPATFULL
```

TI Transforming growth factor alpha HIII
IN Wei, Ying-Fei, Berkeley, CA, UNITED STATES
PI US 2002025553 A1 20020228
AI US 2000-726348 A1 20001201 (9)
RLI Continuation-in-part of Ser. No. US 1997-778545, filed on 3 Jan 1997, PENDING
PRAI US 1996-11136P 19960104 (60)
US 1999-168387P 19991202 (60)
DT Utility
FS APPLICATION
LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 11810
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a novel human protein called Transforming Growth Factor Alpha III, and isolated polynucleotides encoding this protein. Also provided are vectors, host cells, antibodies, and recombinant methods for producing this human protein. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to this novel human protein.

L33 ANSWER 106 OF 113 USPATFULL
AN 2002:22131 USPATFULL
TI 18 Human secreted proteins
IN Shi, Yanggu, Gaithersburg, MD, UNITED STATES
Young, Paul E., Gaithersburg, MD, UNITED STATES
Ebner, Reinhard, Gaithersburg, MD, UNITED STATES
Soppet, Daniel R., Centreville, VA, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
PI US 2002012966 A1 20020131
AI US 2001-768826 A1 20010125 (9)
RLI Continuation-in-part of Ser. No. WO 2000-US22350, filed on 15 Aug 2000, UNKNOWN
PRAI US 1999-148759P 19990816 (60)
DT Utility
FS APPLICATION
LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 18157
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

L33 ANSWER 107 OF 113 USPATFULL
AN 2002:291062 USPATFULL
TI Secreted protein HNFGF20
IN Komatsoulis, George, Silver Spring, MD, United States
Rosen, Craig A., Laytonsville, MD, United States
Ruben, Steven M., Olney, MD, United States
Duan, Roxanne D., Bethesda, MD, United States
Moore, Paul A., Germantown, MD, United States
Shi, Yanggu, Gaithersburg, MD, United States
LaFleur, David W., Washington, DC, United States
Wei, Ying-Fei, Berkeley, CA, United States

Ni, Jian, Rockville, MD, United States
Florence, Kimberly A., Rockville, MD, United States
Young, Paul, Gaithersburg, MD, United States
Brewer, Laurie A., St. Paul, MN, United States
Soppet, Daniel R., Centreville, VA, United States
Endress, Gregory A., Potomac, MD, United States
Ebner, Reinhard, Gaithersburg, MD, United States
Olsen, Henrik, Gaithersburg, MD, United States
Mucenski, Michael, Cincinnati, OH, United States
PA Human Genome Sciences, Inc., Rockville, MD, United States (U.S. corporation)
PI US 6476195 B1 20021105
AI US 2000-489847 20000124 (9)
RLI Continuation-in-part of Ser. No. WO 1999-US17130, filed on 29 Jul 1999
PRAI US 1998-94657P 19980730 (60)
US 1998-95486P 19980805 (60)
US 1998-96319P 19980812 (60)
US 1998-95454P 19980806 (60)
US 1998-95455P 19980806 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Jones, W. Gary; Assistant Examiner: Goldberg, Jeanine
LREP Human Genome Sciences, Inc.
CLMN Number of Claims: 36
ECL Exemplary Claim: 1,7
DRWN 3 Drawing Figure(s); 3 Drawing Page(s)
LN.CNT 20107
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human secreted protein (HNFGF20). Polypeptides of the invention are duseful in dianosis and treatment of disorders affecting the immune system.

L33 ANSWER 108 OF 113 USPATFULL
AN 2002:290742 USPATFULL
TI 94 Human Secreted Proteins
IN Ruben, Steven M., Olney, MD, United States
Ni, Jian, Rockville, MD, United States
Rosen, Craig A., Laytonsville, MD, United States
Wei, Ying-Fei, Berkeley, CA, United States
Young, Paul, Gaithersburg, MD, United States
Florence, Kimberly, Rockville, MD, United States
Soppet, Daniel R., Centreville, VA, United States
Brewer, Laurie A., St. Paul, MN, United States
Endress, Gregory A., Potomac, MD, United States
Carter, Kenneth C., Potomac, MD, United States
Mucenski, Michael, Cincinnati, OH, United States
Ebner, Reinhard, Gaithersburg, MD, United States
Lafleur, David W., Washington, DC, United States
Olsen, Henrik, Gaithersburg, MD, United States
Shi, Yanggu, Gaithersburg, MD, United States
Moore, Paul A., Germantown, MD, United States
Komatsoulis, George, Silver Spring, MD, United States
PA Human Genome Sciences, Inc., Rockville, MD, United States (U.S. corporation)
PI US 6475753 B1 20021105
AI US 1999-461325 19991214 (9)
RLI Continuation-in-part of Ser. No. WO 1999-US13418, filed on 15 Jun 1999
PRAI US 1998-89507P 19980616 (60)
US 1998-89508P 19980616 (60)
US 1998-89509P 19980616 (60)
US 1998-89510P 19980616 (60)
US 1998-90112P 19980622 (60)
US 1998-90113P 19980622 (60)
DT Utility

FS GRANTED
EXNAM Primary Examiner: Eyler, Yvonne; Assistant Examiner: Hamud, Fozia
LREP Human Genome Sciences, Inc.
CLMN Number of Claims: 37
ECL Exemplary Claim: 1
DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
LN.CNT 18031
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human secreted proteins.

L33 ANSWER 109 OF 113 USPATFULL
AN 2002:283360 USPATFULL
TI Keratinocyte derived interferon
IN LaFleur, David W., Washington, DC, United States
Moore, Paul A., Germantown, MD, United States
Ruben, Steven M., Olney, MD, United States
PA Human Genome Sciences, Inc., Rockville, MD, United States (U.S. corporation)
PI US 6472512 B1 20021029
US 2002187950 A1 20021212
AI US 2001-908594 20010720 (9)
RLI Continuation-in-part of Ser. No. US 2000-487792, filed on 20 Jan 2000
Continuation-in-part of Ser. No. WO 2000-US1239, filed on 20 Jan 2000
Continuation-in-part of Ser. No. US 1999-358587, filed on 21 Jul 1999
Continuation-in-part of Ser. No. WO 1999-US16424, filed on 21 Jul 1999
Continuation-in-part of Ser. No. US 2001-358587, filed on 24 May 2001, now abandoned Continuation-in-part of Ser. No. WO 1998-US9916424, filed on 21 Jul 1998, now abandoned
PRAI US 2001-292934P 20010524 (60)
US 2000-219621P 20000721 (60)
US 1998-93643P 19980721 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Kunz, Gary L.; Assistant Examiner: Seharaseyon, Jegatheesan
LREP Human Genome Sciences, Inc.
CLMN Number of Claims: 33
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 11 Drawing Page(s)
LN.CNT 14148
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a novel KDI protein which is a member of the interferon family. In particular, isolated nucleic acid molecules are provided encoding a human interferon polypeptide, called "KDI". KDI polypeptides are also provided as are vectors, host cells and recombinant methods for producing the same. The invention further relates to screening methods for identifying agonists and antagonists of KDI activity. Also provided are therapeutic methods for treating immune system-related disorders.

L33 ANSWER 110 OF 113 USPATFULL
AN 2002:202239 USPATFULL
TI Keratinocyte derived interferon
IN LaFleur, David W., Washington, DC, United States
Moore, Paul A., Germantown, MD, United States
Ruben, Steven M., Olney, MD, United States
PA Human Genome Sciences, Inc., Rockville, MD, United States (U.S. corporation)

PI US 6433145 B1 20020813
AI US 2000-487792 20000120 (9)
RLI Continuation-in-part of Ser. No. US 1999-358587, filed on 21 Jul 1999, now abandoned Continuation-in-part of Ser. No. WO 1999-US16424, filed on 21 Jul 1999
PRAI US 93643P (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Stucker, Jeffrey; Assistant Examiner: Seharaseyon, Jegatheesan
LREP Human Genome Sciences, Inc.
CLMN Number of Claims: 92
ECL Exemplary Claim: 1
DRWN 9 Drawing Figure(s); 9 Drawing Page(s)
LN.CNT 13514
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a novel KDI protein which is a member of the interferon family. In particular, isolated nucleic acid molecules are provided encoding a human interferon polypeptide, called "KDI". KDI polypeptides are also provided as are vectors, host cells and recombinant methods for producing the same. The invention further relates to screening methods for identifying agonists and antagonists of KDI activity. Also provided are therapeutic methods for treating immune system-related disorders.

L33 ANSWER 111 OF 113 USPATFULL
AN 2002:116027 USPATFULL
TI Human chemokine beta-10 mutant polypeptides
IN Olsen, Henrik S., Gaithersburg, MD, United States
Li, Haodong, Gaithersburg, MD, United States
Adams, Mark D., North Potomac, MD, United States
Gentz, Solange H. L., Rockville, MD, United States
Alderson, Ralph, Gaithersburg, MD, United States
Li, Yuling, Germantown, MD, United States
Parmelee, David, Rockville, MD, United States
White, John R., Coatsville, PA, United States
Appelbaum, Edward R., Blue Bell, PA, United States
PA Human Genome Sciences, Inc., Rockville, MD, United States (U.S. corporation)
SmithKline Beecham, Corp., King of Prussia, PA, United States (U.S. corporation)
PI US 6391589 B1 20020521
AI US 2000-479729 20000107 (9)
RLI Continuation-in-part of Ser. No. US 1995-462967, filed on 5 Jun 1995, now abandoned Continuation-in-part of Ser. No. US 1995-458355, filed on 2 Jun 1995, now patented, Pat. No. US 5981230 Continuation-in-part of Ser. No. WO 1994-US9484, filed on 23 Aug 1994
PRAI US 1999-115439P 19990108 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Mertz, Prema
LREP Human Genome Sciences, Inc.
CLMN Number of Claims: 50
ECL Exemplary Claim: 1
DRWN 21 Drawing Figure(s); 14 Drawing Page(s)
LN.CNT 11904
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Human chemokine Beta-10 polypeptides and DNA (RNA) encoding such chemokine polypeptides and a procedure for producing such polypeptides by recombinant techniques is disclosed. Also disclosed are methods for utilizing such chemokine polypeptides for the treatment of leukemia, tumors, chronic infections, autoimmune disease, fibrotic disorders, wound healing and psoriasis. Antagonists against such chemokine polypeptides and their use as a therapeutic to treat rheumatoid

arthritis, autoimmune and chronic inflammatory and infective diseases, allergic reactions, prostaglandin-independent fever and bone marrow failure are also disclosed.

L33 ANSWER 112 OF 113 USPATFULL
AN 2002:81254 USPATFULL
TI Tissue plasminogen activator-like protease
IN Moore, Paul A., Germantown, MD, United States
Ruben, Steven M., Olney, MD, United States
Ebner, Reinhard, Gaithersburg, MD, United States
PA Human Genome Sciences, Inc., Rockville, MD, United States (U.S. corporation)
PI US 6372473 B1 20020416
AI US 1999-411977 19991004 (9)
RLI Continuation-in-part of Ser. No. US 1998-84491, filed on 27 May 1998
PRAI US 1997-48000P 19970528 (60)
DT Utility
FS GRANTED
EXNAM Primary Examiner: Slobodyansky, Elizabeth
LREP Human Genome Sciences, Inc.
CLMN Number of Claims: 77
ECL Exemplary Claim: 1
DRWN 8 Drawing Figure(s); 8 Drawing Page(s)
LN.CNT 11319
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a novel t-PALP protein which is a member of the serine protease family. In particular, isolated nucleic acid molecules are provided encoding the human t-PALP protein. t-PALP polypeptides are also provided as are vectors, host cells and recombinant methods for producing the same. The invention further relates to screening methods for identifying agonists and antagonists of t-PALP activity. Also provided are diagnostic methods for detecting circulatory system-related disorders and therapeutic methods for treating circulatory system-related disorders.

L33 ANSWER 113 OF 113 USPATFULL
AN 2001:155766 USPATFULL
TI 49 human secreted proteins
IN Moore, Paul A., Germantown, MD, United States
Ruben, Steven M., Oley, MD, United States
Olsen, Henrik S., Gaithersburg, MD, United States
Shi, Yanggu, Gaithersburg, MD, United States
Rosen, Craig A., Laytonsville, MD, United States
Florence, Kimberly A., Rockville, MD, United States
Soppet, Daniel R., Centreville, VA, United States
Lafleur, David W., Washington, DC, United States
Endress, Gregory A., Potomac, MD, United States
Ebner, Reinhard, Gaithersburg, MD, United States
Komatsoulis, George, Silver Spring, MD, United States
Duan, Roxanne D., Bethesda, MD, United States
PI US 2001021700 A1 20010913
AI US 2000-739254 A1 20001219 (9)
RLI Continuation of Ser. No. US 2000-511554, filed on 23 Feb 2000, ABANDONED
Continuation-in-part of Ser. No. WO 1999-US19330, filed on 24 Aug 1999, UNKNOWN
PRAI US 1998-97917P 19980825 (60)
US 1998-98634P 19980831 (60)
DT Utility
FS APPLICATION
LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
CLMN Number of Claims: 23
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 15462

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions r

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Inventor Name Search Result

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Last Name = WURTMAN
First Name = RICHARD

Application#	Patent#	Status	Date Filed	Title	Inventor Name
60367489	Not Issued	020	03/27/2002	PLATELET-ACTIVATING FACTOR ANTAGONISTS AS INHIBITORS OF INFLAMMATORY MEDIATED DISEASE	WURTMAN, RICHARD J.
60367488	Not Issued	020	03/27/2002	PLATELET-ACTIVATING FACTOR ANTAGONISTS AS ANALGESICS AND ANTI-INFLAMMATORY AGENTS	WURTMAN, RICHARD J.
60339445	Not Issued	020	12/14/2001	COMPOSITIONS AND METHODS FOR TREATING AND PREVENTING MEMORY IMPAIRMENT USING CITICOLINE	WURTMAN, RICHARD J.
60275127	Not Issued	020	03/13/2001	WEIGHT LOSS COMPOSITIONS AND METHODS FOR INDIVIDUALS WHO COULD HAVE GASTRIC HYPERACIDITY	WURTMAN, RICHARD J.
10397228	Not Issued	019	03/27/2003	PLATELET-ACTIVATED FACTOR ANTAGONISTS AS ANALGESIC, ANTI-INFLAMMATORY, UTERINE CONTRACTION INHIBITING, AND ANTI-TUMOR AGENTS	WURTMAN, RICHARD J.
10096108	Not Issued	030	03/13/2002	WEIGHT LOSS COMPOSITIONS AND METHODS FOR INDIVIDUALS WHO MAY HAVE GASTRIC HYPERACIDITY	WURTMAN, RICHARD J.
10073272	Not Issued	030	02/13/2002	COMPOSITIONS AND METHODS FOR TREATING AND PREVENTING MEMORY IMPAIRMENT USING	WURTMAN, RICHARD J.

				CITICOLINE	
09986470	Not Issued	041	11/08/2001	COMPOSITIONS AND METHODS FOR TREATMENT OF MILD COGNITIVE IMPAIRMENT	WURTMAN, RICHARD J.
09986469	Not Issued	071	11/08/2001	SEROTONERGIC COMPOSITIONS AND METHODS FOR TREATMENT OF MILD COGNITIVE IMPAIRMENT	WURTMAN, RICHARD J.
09775809	6469055	150	02/05/2001	COMPOSITIONS AND METHODS FOR TREATMENT OF NEUROLOGICAL DISORDERS AND NEURODEGENERATIVE DISEASES	WURTMAN, RICHARD J.
09525058	Not Issued	161	03/14/2000	COMPOSITION AND METHOD TO TREAT WEIGHT GAIN AND OBESITY ATTRIBUTABLE TO PSYCHOTROPIC DRUGS	WURTMAN, RICHARD J.
09493228	6187756	150	01/28/2000	COMPOSITION AND METHODS FOR TREATMENT OF NEUROLOGICAL DISORDERS AND NEURODEGENERATIVE DISEASES	WURTMAN, RICHARD J
09492110	Not Issued	094	01/27/2000	COMPOSITION FOR TREATMENT OF STRESS	WURTMAN, RICHARD J.
08971403	Not Issued	161	11/17/1997	COMPOSITIONS OF MELATONIN AND ANALGETIC AGENTS AND METHODS OF USE THEREOF	WURTMAN , RICHARD J.
08924505	6043224	150	09/05/1997	COMPOSITIONS AND METHODS FOR TREATMENT OF NEUROLOGICAL DISORDERS AND NEURODEGENERATIVE DISEASES	WURTMAN , RICHARD J.
08444318	Not Issued	161	05/18/1995	PROCESS FOR INCREASING PHOSPHATIDYLCHOLINE SYNTHESIS IN VIVO	WURTMAN , RICHARD J.
08390092	Not Issued	166	02/17/1995	STIMULATION OF NON-AMYLOIDOGENIC PROCESSING IN CELLS WITH METABOTROPIC GLUTAMATE RECEPTORS	WURTMAN , RICHARD J.
07959253	Not	161	10/09/1992	RELEASE OF ALZHEIMER	WURTMAN ,

	Issued			AMYLOID PRECURSOR STIMULATED BY ACTIVATION OF MUSCARINIC ACETYLCHOLINE RECEPTORS	RICHARD J.
07955304	Not Issued	161	10/01/1992	METHODS OF INDUCING SLEEP USING MELATONIN	WURTMAN , RICHARD J.
07891681	Not Issued	161	05/29/1992	METHOD AND COMPOSITION FOR TREATMENT OF NEUROLOGICAL DISORDERS	WURTMAN , RICHARD J.
07849246	Not Issued	166	03/11/1992	REDUCING POST-PRANDIAL FLUCTUATIONS IN PLASMA CONCENTRATIONS OF LARGE NEUTRAL AMINO ACIDS (LNAA)	WURTMAN , RICHARD J.
07810078	Not Issued	161	12/19/1991	PROCESS FOR INCREASING PHOSPHATIDYLCHOLINE SYNTHESIS IN VIVO	WURTMAN , RICHARD J.
07650734	Not Issued	163	02/05/1991	METHOD FOR TREATING THE PERMENSTRUAL OR LATE LUTEAL PHASE SYNDROME	WURTMAN , RICHARD J.
07565046	5223540	150	08/09/1990	METHOD FOR TREATING THE PREMENSTRUAL OR LATE LUTEAL PHASE SYNDROME	WURTMAN , RICHARD J.
07536908	Not Issued	163	06/12/1990	PROCESS FOR INCREASING PHOSPHATIDYLCHOLINE SYNTHESIS IN VIVO	WURTMAN , RICHARD J.
07343775	Not Issued	161	04/24/1989	METHOD AND COMPOSITION FOR ENHANCING THE EFFECT OF INDIRECT-ACTING SYMPATHOMIMETIC AMINES	WURTMAN , RICHARD J.
07284074	5118670	150	12/14/1988	PROCESS AND COMPOSITION FOR INCREASING BRAIN DOPAMINE RELEASE	WURTMAN , RICHARD J.
07262625	4999382	150	10/26/1988	COMPOSITIONS FOR TREATING TOBACCO WITHDRAWAL SYMPTOMS AND METHODS FOR THEIR USE	WURTMAN , RICHARD J.
07244944	4971998	150	09/15/1988	METHODS FOR TREATING THE PREMENSTRUAL OR LATE LUEAL PHASE SYNDROME	WURTMAN , RICHARD J.
07239542	5051410	150	09/01/1988	METHOD AND COMPOSITION FOR ENHANCING THE RELEASE OF NEUROTRANSMITTERS	WURTMAN , RICHARD J.

07111771	Not Issued	161	10/22/1987	COMPOSITIONS FOR TREATING THE PREMENSTRUAL OR LATE LUTEAL PHASE SYNDROME AND METHODS FOR THEIR USE	WURTMAN , RICHARD J.
07102062	4775665	150	09/24/1987	METHOD AND COMPOSITION FOR TREATING NEUROLOGICAL DISORDERS AND AGING	WURTMAN , RICHARD J.
06947208	4885312	150	12/29/1986	METHOD FOR ENHANCING THE EFFECT OF INDIRECT-ACTING SYMPATHOMIMETIC AMINES	WURTMAN , RICHARD J.
06927620	Not Issued	163	11/06/1986	METHOD FOR IMPROVING PERFORMANCE AND MOOD IN NORMAL HUMAN PATIENTS	WURTMAN , RICHARD J.
06874609	4649161	150	06/16/1986	METHOD FOR TREATING DEPRESSION WITH D-FENFLURAMINE	WURTMAN , RICHARD J.
06845141	4673689	150	03/27/1986	METHOD AND COMPOSITION FOR ENHANCING THE EFFECT OF INDIRECT-ACTING SYMPATHOMIMETIC AMINES	WURTMAN , RICHARD J.
06780054	4598094	150	09/25/1985	METHOD AND COMPOSITION FOR ENHANCING THE EFFECT OF INDIRECT-ACTING SYMPATHOMIMETIC AMINES	WURTMAN , RICHARD J.
06738001	Not Issued	161	05/28/1985	CYTIDYL DIPHOSPHOCHOLINE-DRUG COMPOSITION AND PROCESS	WURTMAN , RICHARD J.
06705174	4687763	150	02/25/1985	COMPOSITION AND METHOD FOR INCREASING LEVELS OR RELEASE OF BRAIN SEROTONIN	WURTMAN , RICHARD J.
06685591	4737489	150	12/21/1984	METHOD AND COMPOSITION FOR TREATING NEUROLOGICAL DISORDERS AND AGING	WURTMAN , RICHARD J.
06613000	4624852	150	05/21/1984	PROCESS AND COMPOSITION FOR TREATING NEUROLOGICAL DISORDERS AND AGING	WURTMAN , RICHARD J.
06574198	Not Issued	161	01/26/1984	METHOD FOR IMPROVING SLEEP	WURTMAN , RICHARD J.
06571125	Not	001	01/16/1984	PROCESS AND COMPOSITION	WURTMAN ,

	Issued			FOR TREATING DISORDER BY ADMINISTERING A PHENOTHIAZINE AND CHOLINE	RICHARD J.
06564607	4569929	150	12/22/1983	CYTIDYL DIPHOSPHOCHOLINE-DRUG COMPOSITION	WURTMAN , RICHARD J.
06529795	Not Issued	161	10/24/1983	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING A GLUCO-CORTICOSTEROID AND CHOLINE	WURTMAN , RICHARD J.
06522879	Not Issued	161	08/12/1983	COMPOSITION AND METHOD FOR INCREASING NEURONAL TYROSINE LEVELS	WURTMAN , RICHARD J.
06495202	Not Issued	166	05/16/1983	METHOD AND COMPOSITION FOR TREATING NEUROLOGICAL DISORDERS AND AGING	WURTMAN , RICHARD J.
06356570	Not Issued	161	03/09/1982	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING A PHENOTHIAZINE AND CHOLINE	WURTMAN , RICHARD J.
06338682	4542123	150	01/11/1982	COMPOSITION AND METHOD FOR INCREASING BRAIN TYROSINE LEVELS	WURTMAN , RICHARD J.
06159549	4309445	150	06/16/1980	D-FENFLURAMINE FOR MODIFYING FEEDING BEHAVIOR	WURTMAN , RICHARD J.
06066158	Not Issued	162	08/13/1979	PROCESS FOR REDUCING DEPRESSION	WURTMAN , RICHARD J.

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Inventor Name Search Result

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Last Name = WURTMAN
First Name = RICHARD

Application#	Patent#	Status	Date Filed	Title	Inventor Name
60095002	Not Issued	159	07/31/1998	METHODS FOR INCREASING CYTIDINE LEVELS IN VIVO AND TREATING CYTIDINE-DEPENDENT HUMAN DISEASES	WURTMAN , RICHARD J.
60093013	Not Issued	159	07/16/1998	COMPOSITION FOR THE TREATMENT OF STRESS	WURTMAN , RICHARD J.
60042858	Not Issued	159	03/28/1997	REGULATION OF AMYLOID PRECURSOR PROTEIN (APP) EXPRESSION BY ESTROGENIC COMPOUND	WURTMAN , RICHARD J.
60033765	Not Issued	159	01/15/1997	METHODS FOR THE TREATMENT OF NEUROLOGICAL DISORDERS AND NEURODEGENERATIVE DISEASES AND COMPOSITIONS FOR USE IN SAME	WURTMAN , RICHARD J.
60025507	Not Issued	159	09/05/1996	B-ADRENERGIC RECEPTOR AGONISTS COUPLED TO CYCLIC AMP FORMATION INCREASE AMYLOID PRECURSOR PROTEIN (APP) EXPRESSION	WURTMAN , RICHARD J.
09435470	6184248	150	11/08/1999	COMPOSITIONS AND METHODS FOR TREATMENT OF NEUROLOGICAL DISORDERS AND NEURODEGENERATIVE DISEASES	WURTMAN , RICHARD J.
09383637	Not Issued	120	08/26/1999	STIMULATION OF NON-AMYLOIDOGENIC PROCESSING IN CELLS WITH METABOTROPIC GLUTAMATE	WURTMAN , RICHARD J.

				RECEPTORS	
09363748	Not Issued	061	07/30/1999	METHODS FOR INCREASING CYTIDINE LEVELS IN VIVO ANDTREATING CYTIDINE-DEPENDENT HUMAN DISEASES	WURTMAN , RICHARD J.
09354738	Not Issued	168	07/16/1999	COMPOSITION FOR TREATMENT OF STRESS	WURTMAN , RICHARD J.
09153457	Not Issued	169	09/15/1998	COMPOSITION AND METHOD FOR FACILITATING MAINTENANCE OF MEMORY AND MENTAL ALERTNESS IN HUMANS	WURTMAN , RICHARD J.
09049199	Not Issued	161	03/27/1998	AGENTS FOR STIMULATION OF NONAMYLOIDOGENIC PROCESSING IN CELLS WITH METABOTROPIC GLUTAMATE RECEPTORS	WURTMAN , RICHARD J.
09049198	6333317	150	03/27/1998	REGULATION OF AMYLOID PRECURSOR PROTEIN (APP) EXPRESSION BY ADMINISTRATION OF AN ESTROGENIC COMPOUND	WURTMAN , RICHARD J.
08990990	Not Issued	169	12/15/1997	REDUCING POST-PRANDIAL FLUCTUATIONS IN PLASMA CONCENTRATIONS OF LARGE NEUTRAL AMINO ACIDS (LNAA)	WURTMAN , RICHARD J.
08789336	5962463	150	01/27/1997	METHODS OF STIMULATING NON-AMYLOIDOGENIC PROCESSING OF THE AMYLOID PRECURSOR PROTEIN	WURTMAN , RICHARD J.
08481624	5595772	150	06/07/1995	COMPOSITION AND METHODS FOR LOSING WEIGHT	WURTMAN , RICHARD J.
08475452	5641801	150	06/07/1995	METHOD OF REDUCING THE PERIOD BEFORE THE ONSET OF SLEEP	WURTMAN , RICHARD J.
08471036	5698525	150	06/06/1995	REDUCING POST-PRANDIAL FLUCTUATIONS IN PLASMA CONCENTRATIONS OF LARGE NEUTRAL AMINO ACIDS (LNAA)	WURTMAN , RICHARD J.
08461648	5545566	150	06/05/1995	ANTEMORTEM DIAGNOSTIC TEST FOR ALZHEIMER'S DISEASE	WURTMAN , RICHARD J.

08337993	Not Issued	166	11/10/1994	METHODS OF STIMULATING NON-AMYLOIDOGENIC PROCESSING OF THE AMYLOID PRECURSOR PROTEIN	WURTMAN , RICHARD J.
08299560	Not Issued	166	09/01/1994	COMPOSITIONS OF MELATONIN AND ANALGETIC AGENTS AND METHODS OF USE THEREOF	WURTMAN , RICHARD J.
08228078	6329155	150	04/15/1994	METHODS OF IDENTIFYING AGENTS WHICH REGULATE RELEASE OF AMYLOID PRECURSOR PROTEIN	WURTMAN , RICHARD J.
08213476	Not Issued	166	03/16/1994	PROCESS FOR INCREASING PHOSPHATIDYLCHOLINE SYNTHESIS IN VIVO	WURTMAN , RICHARD J.
08187263	5432162	150	01/27/1994	REDUCING POST-PRANDIAL FLUCTUATIONS IN PLASMA CONCENTRATIONS OF LARGE NEUTRAL AMINO ACIDS (LNAA)	WURTMAN , RICHARD J.
08093317	5449683	150	07/16/1993	METHODS OF INDUCING SLEEP USING MELATONIN	WURTMAN , RICHARD J.
08086759	Not Issued	166	07/06/1993	PROCESS FOR INCREASING PHOSPHATIDYLCHOLINE SYNTHESIS IN VIVO	WURTMAN , RICHARD J.
07971113	Not Issued	166	11/04/1992	PROCESS FOR INCREASING PHOSPHATIDYLCHOLINE SYNTHESIS IN VIVO	WURTMAN , RICHARD J.
07959084	Not Issued	166	10/09/1992	ANTEMORTEM DIAGNOSTIC TEST FOR ALZHEIMER'S DISEASE	WURTMAN , RICHARD J.
07627956	Not Issued	163	12/17/1990	METHOD AND COMPOSITION FOR DECREASING APPETITE	WURTMAN , RICHARD J.
07619301	5179126	150	11/28/1990	COMPOSITIONS FOR TREATING TOBACCO WITHDRAWAL SYMPTOMS AND METHODS FOR THEIR USE	WURTMAN , RICHARD J.
07442011	5019594	150	11/28/1989	METHOD FOR DECREASING APPETITE	WURTMAN , RICHARD J.
07398763	Not Issued	166	08/25/1989	METHOD AND COMPOSITION FOR TREATMENT OF NEUROLOGICAL DISORDERS	WURTMAN , RICHARD J.
07332871	5206218	150	04/03/1989	REDUCING POST-PRANDIAL FLUCTUATIONS IN PLASMA	WURTMAN , RICHARD J.

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				CONCENTRATIONS OF LARGE NEUTRAL AMINO ACIDS (LNAA)	
07003514	Not Issued	163	01/15/1987	PROCESS FOR INCREASING PHOSPHATIDYLCHOLINE SYNTHESIS IN VIVO	WURTMAN , RICHARD J.
06735894	Not Issued	164	05/17/1985	METHOD FOR ENHANCING THE PRODUCTION AND RELEASE OF CATECHOLAMINES	WURTMAN , RICHARD J.
06665679	4745130	150	10/29/1984	COMPOSITION FOR INCREASING BLOOD PRESSURE	WURTMAN , RICHARD J.
06378452	Not Issued	161	05/14/1982	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING A GLUCO-CORTICOSTEROID AND CHOLINE	WURTMAN , RICHARD J.
06374555	4456598	250	05/03/1982	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING A BUTYROPHENONE AND A CHOLINE	WURTMAN , RICHARD J.
06366888	4430330	150	04/08/1982	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING A PHENOTHIAZINE AND CHOLINE	WURTMAN , RICHARD J.
06366887	Not Issued	163	04/08/1982	PROCESS AND COMPOSITION FOR INCREASING BLOOD PRESSURE	WURTMAN , RICHARD J.
06358938	4636494	150	03/17/1982	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING AMPHETAMINE AND CHOLINE	WURTMAN , RICHARD J.
06355967	Not Issued	166	03/08/1982	METHOD FOR IMPROVING SLEEP	WURTMAN , RICHARD J.
06264522	4470987	250	05/18/1981	PROCESS FOR TREATMENT AND PREVENTION OF VENTRICULAR FIBRILLATION	WURTMAN , RICHARD J.
06229894	Not Issued	161	01/30/1981	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING A PHENOTHIAZINE AND	WURTMAN , RICHARD J.

				CHOLINE	
06229893	Not Issued	161	01/30/1981	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING A BUTYROPHENONE AND A CHOLINE	WURTMAN , RICHARD J.
06229812	4346085	150	01/30/1981	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING AMPHETAMINE AND CHOLINE	WURTMAN , RICHARD J.
06229802	4346084	150	01/30/1981	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING LITHIUM AND CHOLINE	WURTMAN , RICHARD J.
06229801	Not Issued	161	01/30/1981	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING A GLUCO-CORTICOSTEROID AND CHOLINE	WURTMAN , RICHARD J.
06145909	4327112	150	05/02/1980	PROCESS FOR INCREASING BLOOD PRESSURE	WURTMAN , RICHARD J.
06145644	4405629	150	05/02/1980	PROCESS FOR INCREASING GLYCINE LEVELS IN THE BRAIN AND SPINAL CORD	WURTMAN , RICHARD J.
06122422	4271192	150	02/19/1980	PROCESS FOR TREATMENT AND PREVENTION OF VENTRICULAR FIBRILLATION	WURTMAN , RICHARD J.
06066158	Not Issued	162	08/13/1979	PROCESS FOR REDUCING DEPRESSION	WURTMAN , RICHARD J.

Search and Display More Records.

Search Another: Inventor Last Name: wurtman First Name: richard Search

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Day : Monday
Date: 5/12/2003

PALM INTRANET

Time: 17:36:55

Inventor Name Search Result

Your Search was:

Last Name = WURTMAN
First Name = RICHARD

Application#	Patent#	Status	Date Filed	Title	Inventor Name
60246615	Not Issued	020	11/08/2000	COMPOSITIONS AND METHODS FOR TREATMENT OF MILD COGNITIVE IMPAIRMENT	WURTMAN PH.D, RICHARD
08854800	Not Issued	161	05/12/1997	STIMULATION OF NON-AMYLOIDOGENIC PROCESSING IN CELLS WITH METABOTROPIC GLUTAMATE RECEPTORS	WURTMAN , RICHARD J.
08573656	Not Issued	166	12/18/1995	COMPOSITION OF MELATONIN AND ANALGETIC AGENTS AND METHODS OF USE THEREOF	WURTMAN , RICHARD J.
08353960	5631168	150	12/12/1994	ANTEMORTEM DIAGNOSTIC TEST FOR ALZHEIMER'S DISEASE	WURTMAN , RICHARD J.
08029505	Not Issued	166	03/11/1993	REDUCING POST-PRANDIAL FLUCTUATIONS IN PLASMA CONCENTRATIONS OF LARGE NEUTRAL AMINO ACIDS (LNAA)	WURTMAN , RICHARD J.
07489445	5096712	150	03/06/1990	METHOD FOR ENHANCING PERFORMANCE SO AS TO IMPROVE VIGOR AND DECREASE FATIGUE, CONFUSION, TENSION AND ANXIETY	WURTMAN , RICHARD J.
07179590	Not Issued	161	04/08/1988	METHOD AND COMPOSITION FOR TREATMENT OF NEUROLOGICAL DISORDERS	WURTMAN , RICHARD J.
07156109	4927853	250	02/16/1988	COMPOSITION FOR INCREASING BLOOD PRESSURE	WURTMAN , RICHARD J.

06785928	4609647	150	10/09/1985	CYTIDYL DIPHOSPHOCHOLINE-DRUG COMPOSITION AND PROCESS	WURTMAN , RICHARD J.
06780053	4626527	150	09/28/1985	PROCESS FOR UTILIZING CHOLINE TO SUSTAIN MUSCULAR PERFORMANCE	WURTMAN , RICHARD J.
06297623	4435424	150	08/31/1981	PROCESS FOR IMPROVING VIGOR AND MOOD IN NORMAL HUMAN PATIENTS	WURTMAN , RICHARD J.
06288583	4452815	150	07/30/1981	METHOD OF UTILIZING D,1-FENFLURAMINE FOR MODIFYING FEEDING BEHAVIOR	WURTMAN , RICHARD J.
06284768	4355027	150	07/20/1981	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING PIRACETAM AND CHOLINE	WURTMAN , RICHARD J.
06229704	4351831	150	01/30/1981	PROCESS AND COMPOSITION FOR TREATING DISORDERS BY ADMINISTERING ISOXSURPINE AND CHOLINE	WURTMAN , RICHARD J.
06169001	Not Issued	161	07/15/1980	PROCESS FOR IMPROVING VIGOR AND MOOD IN NORMAL HUMAN PATIENTS	WURTMAN , RICHARD J.
06154189	4377595	150	05/29/1980	PROCESS FOR REDUCING DEPRESSION	WURTMAN , RICHARD J.
06145909	4327112	150	05/02/1980	PROCESS FOR INCREASING BLOOD PRESSURE	WURTMAN , RICHARD J.

Inventor Search Completed: No Records to Display.

Search Another: Inventor **Last Name** wurtman **First Name** richard Search

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Day : Monday
Date: 5/12/2003

Time: 17:37:19

PALM INTRANET

Inventor Name Search Result

Your Search was:

Last Name = TEATHER
First Name = LISA

Application#	Patent#	Status	Date Filed	Title	Inventor Name
60367489	Not Issued	020	03/27/2002	PLATELET-ACTIVATING FACTOR ANTAGONISTS AS INHIBITORS OF INFLAMMATORY MEDIATED DISEASE	TEATHER, LISA A.
60367488	Not Issued	020	03/27/2002	PLATELET-ACTIVATING FACTOR ANTAGONISTS AS ANALGESICS AND ANTI-INFLAMMATORY AGENTS	TEATHER, LISA A.
60339445	Not Issued	020	12/14/2001	COMPOSITIONS AND METHODS FOR TREATING AND PREVENTING MEMORY IMPAIRMENT USING CITICOLINE	TEATHER, LISA A.
60323530	Not Issued	020	09/19/2001	METHODS AND PRODUCTS RELATED TO NON-VIRAL TRANSFECTION	TEATHER, LISA
10397228	Not Issued	019	03/27/2003	PLATELET-ACTIVATED FACTOR ANTAGONISTS AS ANALGESIC, ANTI-INFLAMMATORY, UTERINE CONTRACTION INHIBITING, AND ANTI-TUMOR AGENTS	TEATHER, LISA A.
10073272	Not Issued	030	02/13/2002	COMPOSITIONS AND METHODS FOR TREATING AND PREVENTING MEMORY IMPAIRMENT USING CITICOLINE	TEATHER, LISA

Inventor Search Completed: No Records to Display.

Search Another: Inventor **Last Name** teather **First Name** lisa Search

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WEST Search History

DATE: Monday, May 12, 2003

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L20	L19 or l18 or l17 or l13 or l12 or l5	27	L20
L19	L16 and l3	25	L19
L18	L10 and l16	10	L18
L17	L16 and l9	10	L17
L16	L15 and l15	847	L16
L15	L14 or l1	847	L15
L14	((514/49)!.CCLS. |(50/)!.CCLS.)	378	L14
L13	L1 and l10	1	L13
L12	L11 and l1	1	L12
L11	L10 and l7	64	L11
L10	L9 or citicholin43	112	L10
L9	citicolin$3	112	L9
L8	L7 and l2	15548	L8
L7	(cytidin$3 or uridin43 or cholin$3)	19322	L7
L6	L4 and (cytidin$3 or uridin43 or cholin$3)	756	L6
L5	L4 and l1	3	L5
L4	L3 and (linolei$3 or linoleni$3 or arachidon$3)	756	L4
L3	L2 and (cogniti$5 or AD or alzheimer$3)	3953	L3
L2	cholin$3	15548	L2
L1	((560,/)!.CCLS. |(514/642)!.CCLS. |(549,/)!.CCLS. |(552/)!.CCLS.)	469	L1

END OF SEARCH HISTORY

L22 ANSWER 6 OF 9 CA COPYRIGHT 2003 ACS
AN 125:1166 CA
TI Therapeutic effects of CDP-**choline** in **Alzheimer**'s disease: **cognition**, brain mapping, cerebrovascular hemodynamics, and immune factors
AU Cacabelos, R.; Caamano, J.; Gomez, M. J.; Fernandez-Novoa, L.; Franco-Maside, A.; Alvarez, X. A.
CS Basic and Clinical Neurosciences Research Center, Institute for CNS Disorders, La Coruna, 15080, Spain
SO Annals of the New York Academy of Sciences (1996), 777(Neurobiology of Alzheimers Disease), 399-403
CODEN: ANYAA9; ISSN: 0077-8923
PB New York Academy of Sciences
DT Journal
LA English
AB CDP-**choline** was given to patients with **Alzheimer**'s disease (**AD**) at a daily dose of 1000 mg/day p.o. for one month. This compd. slightly improved mental performance, tended to reduce theta activity in fronto-temporal regions, increasing alpha power in occipital areas, and enhanced cerebrovascular perfusion by increasing blood flow velocity and reducing pulsatility and resistance indexes. In addn., CDP-**choline** diminished histamine and interleukin-1 levels in blood and serum, resp., and increased plasma TNF.

L22 ANSWER 7 OF 9 CA COPYRIGHT 2003 ACS
AN 122:95713 CA
TI Metabolism and actions of CDP-**choline** as an endogenous compound and administered exogenously as **citicoline**
AU Weiss, George B.
CS M. Hurley & Associates, Inc., Murray Hill, NJ, 07947-1584, USA
SO Life Sciences (1995), 56(9), 637-60
CODEN: LIFSAK; ISSN: 0024-3205
PB Elsevier
DT Journal; General Review
LA English
AB A review with 184 refs. CDP-**choline**, supplied exogenously as **citicoline**, has beneficial physiol. actions on cellular function that have been extensively studied and characterized in numerous model systems. As the product of the rate-limiting step in the synthesis of phosphatidylcholine from **choline**, CDP-**choline** and its hydrolysis products (**cytidine** and **choline**) play important roles in generation of phospholipids involved in membrane formation and repair. They also contribute to such crit. metabolic functions as formation of nucleic acids, proteins, and acetylcholine. Orally-administered **citicoline** is hydrolyzed in the intestine, absorbed rapidly as **choline** and **cytidine**, resynthesized in liver and other tissues, and subsequently mobilized in CDP-**choline** synthetic pathways. **Citicoline** is efficiently utilized in brain cells for membrane lipid synthesis where its not only increases phospholipid synthesis but also inhibits phospholipid degrdn. Exogenously administered **citicoline** prevents, reduces, or reverses effects of ischemia and/or hypoxia in most animal and cellular models studied, and acts in heat trauma models to decrease and limit nerve cell membrane damage, restore intracellular regulatory enzyme sensitivity and function, and limit edema. Thus, considerable accumulated evidence supports use of **citicoline** to enhance membrane maintenance, membrane repair, and neuronal function in conditions such as ischemic and traumatic injuries. Beneficial effects of exogenous **citicoline** also have been postulated and/or reported in exptl. models for dyskinesia, Parkinson's disease, aging, **Alzheimer**'s disease, learning and **memory**, and **cholinergic** stimulation.

L22 ANSWER 8 OF 9 CA COPYRIGHT 2003 ACS
AN 121:148887 CA

TI Effects of CDP-**choline** on **cognition** and cerebral hemodynamics in patients with **Alzheimer**'s disease
AU Caamano, J.; Gomez, M.J.; Franco, A.; Cacabelos, R.
CS Basic Clin. Neurosci. Res. Cent., Inst. C.N.S. Dis., La Coruna, Spain
SO Methods and Findings in Experimental and Clinical Pharmacology (1994), 16(3), 211-18
CODEN: MFEPDX; ISSN: 0379-0355
DT Journal
LA English
AB CDP-**choline** (**cytidine**-5-diphosphate-**choline**) is an acetylcholine precursor frequently used in cerebrovascular disorders and psychoorg. syndromes. Furthermore, several authors have demonstrated the pos. effects of CDP-**choline** on **cognitive** disorders and **memory** deficits. In the present study, the effects of CDP-**choline** (1000 mg/day, p.o. for 1 mo) on **cognition**, evaluated by the Mini-Mental State Examn. (MMSE) of Folstein et al., and on blood flow velocities, measured by transcranial Doppler ultrasonog. (TCD), were investigated in patients with **Alzheimer**'s disease: (**AD**, n = 20, age: 66.75 +/-6.73 yr, range: 57-78 yr). **Cognitive** function was measured by means of the MMSE in basal conditions (A) and after 1 mo of treatment with CDP-**choline** (C). TCD measures were taken through the temporal window for right (MCA-R) and left (MCA-L) middle cerebral arteries with a 2 MHz pulsed transducer using a TC-2000S in basal conditions (A), 1 h after the administration of CDP-**choline** (B) and after 1 mo of treatment with CDP-**choline** (C). MMSE scores were significantly increased ($p < 0.005$) in patients with early-onset **Alzheimer**'s disease (EOAD) after CDP-**choline** treatment. Moreover, the orientation subtest significantly increased in the global group of **AD** patients ($p < 0.01$) and in EOAD patients ($p < 0.02$). Significant differences ($p < 0.05$) were also found in MCA-L and MCA-R measures between recordings. These results suggest that CDP-**choline** influences **cognitive** and cerebrovascular function in **Alzheimer**'s disease, probably through a mechanism linked to an immunogenic and/or neurotrophic effect at the microvascular niche. However, a direct vasoactive effect on the vascular endothelium cannot be ruled out.

L22 ANSWER 9 OF 9 CA COPYRIGHT 2003 ACS
AN 119:217138 CA
TI Influence of CDP-**choline** on **cognition** and interleukin-1.beta. in **Alzheimer**'s disease and multi-infarct dementia
AU Cacabelos, R.; Alvarez, X. A.; Franco-Maside, A.; Fernandez-Novoa, L.; Caamano, J.
CS Basic Clin. Neurosci. Res. Cent., Inst. CNS Disord., La Coruna, 15080, Spain
SO Advances in the Biosciences (Oxford) (1993), 87(Alzheimer's Disease and Related Disorders), 347-8
CODEN: AVBIB9; ISSN: 0065-3446
DT Journal
LA English
AB CDP-**choline** (**cytidine**-5-diphosphate **choline**) seems suitable for treatment of senile dementia. The redn. in the levels of serum interleukin-1.beta. induced by CDP-**choline** might represent an indirect indicator of the neuroprotecting effect of this compd. and/or its capability for modulating immunogenesis.

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	39.42	84.13

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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=> e citicoline/cn
E1            1     CITICHOLINE/CN
E2            1     CITICIDE/CN
E3            1 --> CITICOLINE/CN
E4            1     CITICOLINE HYPERHYDRATE/CN
E5            1     CITICOLINE SODIUM/CN
E6            1     CITICOLINE TETRAHYDRATE/CN
E7            1     CITIDOLINE/CN
E8            1     CITIFAR/CN
E9            1     CITIFLUOR/CN
E10           1     CITIFLUOR AF 1/CN
E11           1     CITIFLUOR AF 101/CN
E12           1     CITIFLUOR AF 111/CN

=> s e3
L1            1 CITICOLINE/CN

=> d l1

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   987-78-0  REGISTRY
CN   Cytidine 5'-(trihydrogen diphosphate), P'-[2-(trimethylammonio)ethyl]
     ester, inner salt (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Choline, hydroxide, 5'-ester with cytidine 5'-(trihydrogen pyrophosphate),
     inner salt (8CI)
CN   Cytidine 5'-(trihydrogen diphosphate), P'-[2-(trimethylammonio)ethyl]
     ester, hydroxide, inner salt
OTHER NAMES:
CN   Audas
CN   CDP-choline
CN   Cereb
CN   Choline 5'-cytidine diphosphate
CN   Choline cytidine diphosphate
CN   Citicholine
CN   Citicoline
CN   Citidoline
CN   Citifar
CN   Colite
CN   Corenalin
CN   Cyscholin
CN   Cytidine 5'-(choline diphosphate)
CN   Cytidine 5'-(cholinyl pyrophosphate)
CN   Cytidine 5'-diphosphate choline
CN   Cytidine 5'-diphosphocholine
CN   Cytidine choline diphosphate
CN   Cytidine diphosphate choline
CN   Cytidine diphosphate choline ester
CN   Cytidine diphosphocholine
CN   Cytidine diphosphorylcholine
CN   Cytidoline
CN   Difosfocin
CN   Emicholine F
CN   Ensign
CN   Haocolin
CN   Hornbest
CN   Neucolis
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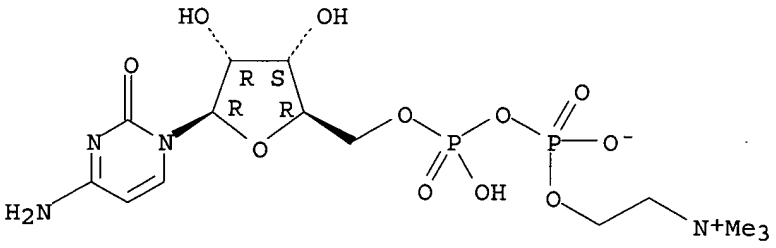
CN Nicholin
CN Nicolin
CN Niticolin
CN Reagin
CN Recofnan
CN Recognan
CN Rexort
CN Sintoclar
CN Somazina
CN Somazine
CN Suncholin
FS STEREOSEARCH
DR 1477-47-0, 64143-42-6
MF C14 H26 N4 O11 P2
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGNL, DRUGU, DRUGUPDATES, EMBASE, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PHAR, PHARMASEARCH, PROMT, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



761 REFERENCES IN FILE CA (1957 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
761 REFERENCES IN FILE CAPLUS (1957 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e linoleic acid/cn
E1 1 LINOLEATE ISOMERASE/CN
E2 1 LINOLEATE PEROXYL RADICAL/CN
E3 1 --> LINOLEIC ACID/CN
E4 1 LINOLEIC ACID (D(-)-), (2,2-DIMETHYL-1,3-DIOXOLAN-4-YL)METHYL ESTER/CN
E5 1 LINOLEIC ACID (L(-)-), 2-HYDROXY-3-(TRILYLOXY)PROPYL ESTER/CN
E6 1 LINOLEIC ACID .OMEGA.-6 LIPOXYGENASE/CN
E7 1 LINOLEIC ACID 1-(2-NAPHTHYL)ETHYL ESTER/CN
E8 1 LINOLEIC ACID 1-NAPHTHYLMETHYL ESTER/CN
E9 1 LINOLEIC ACID 10-HYDROPEROXIDE/CN
E10 1 LINOLEIC ACID 12-HYDROPEROXIDE/CN
E11 1 LINOLEIC ACID 13(S)-HYDROPEROXIDE/CN
E12 2 LINOLEIC ACID 13-HYDROPEROXIDE/CN

=> s e3
L2 1 "LINOLEIC ACID"/CN

=> d l2

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS
RN 60-33-3 REGISTRY
CN 9,12-Octadecadienoic acid (9Z,12Z)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9,12-Octadecadienoic acid (Z,Z)-
CN **Linoleic acid (8CI)**
OTHER NAMES:
CN (Z,Z)-9,12-Octadecadienoic acid
CN .alpha.-Linoleic acid
CN 9,12-Octadecadienoic acid, (Z,Z)-
CN 9-cis,12-cis-Linoleic acid
CN 9Z,12Z-Linoleic acid
CN 9Z,12Z-Octadecadienoic acid
CN 9Z,12Z-Octadecadienoic acid
CN all-cis-9,12-Octadecadienoic acid
CN cis,cis-Linoleic acid
CN cis-.DELTA.9,12-Octadecadienoic acid
CN cis-9,cis-12-Octadecadienoic acid
CN Emersol 315
CN Extra Linoleic 90
CN Linolic acid
CN Polylin 515
CN Unifac 6550
FS STEREOSEARCH
MF C18 H32 O2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TULSA, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
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(**Enter CHEMLIST File for up-to-date regulatory information)

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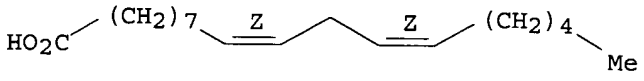

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1185 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
28454 REFERENCES IN FILE CAPLUS (1957 TO DATE)
10 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> e linolenic acid/cn
E1 1 LINOLENATE 2(R)-LIPOXYGENASE/CN
E2 1 LINOLENELAIDIC ACID/CN
E3 1 --> LINOLENIC ACID/CN
E4 1 LINOLENIC ACID 13-HYDROPEROXIDE/CN
E5 1 LINOLENIC ACID 9-HYDROPEROXIDE/CN
E6 1 LINOLENIC ACID AMINOMETHYLPROPANOL SALT/CN
E7 1 LINOLENIC ACID ANILIDE/CN
E8 1 LINOLENIC ACID CHLORIDE/CN
E9 1 LINOLENIC ACID DIETHANOLAMIDE/CN
E10 1 LINOLENIC ACID GLYCERIDE/CN

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E12          1     LINOLENIC ACID HYDROPEROXIDE/CN

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L3           1 "LINOLENIC ACID"/CN

=> d l3

L3   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   463-40-1  REGISTRY
CN   9,12,15-Octadecatrienoic acid, (9Z,12Z,15Z)- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   9,12,15-Octadecatrienoic acid, (Z,Z,Z)-
CN   Linolenic acid (8CI)
OTHER NAMES:
CN   (all-Z)-9,12,15-Octadecatrienoic acid
CN   (Z,Z,Z)-Octadeca-9,12,15-trienoic acid
CN   .alpha.-Linolenic acid
CN   9,12,15-all-cis-Octadecatrienoic acid
CN   9-cis,12-cis,15-cis-Octadecatrienoic acid
CN   9Z,12Z,15Z-Octadecatrienoic acid
CN   all-cis-9,12,15-Octadecatrienoic acid
CN   cis,cis,cis-9,12,15-Octadecatrienoic acid
CN   cis-.DELTA.9,12,15-Octadecatrienoic acid
CN   cis-9,cis-12,cis-15-Octadecatrienoic acid
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MF   C18 H30 O2
CI   COM
LC   STN Files:   AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS,
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       CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DIPPR*, DRUGU, EMBASE,
       GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS,
       NAPRALERT, NIOSHTIC, PIRA, PROMT, SPECINFO, TOXCENTER, TULSA, USPAT2,
       USPATFULL, VETU
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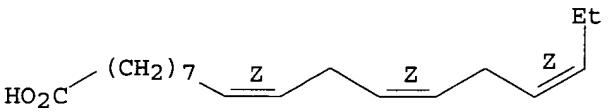


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          14763 REFERENCES IN FILE CAPLUS (1957 TO DATE)
              4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)


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E2           1     ARACHIDONIC 5-LIPOXYGENASE/CN
E3           1 --> ARACHIDONIC ACID/CN
E4           1     ARACHIDONIC ACID (N,2,2-3H)ETHANOLAMIDE/CN
E5           1     ARACHIDONIC ACID .OMEGA.-1 HYDROXYLASE (MOUSE STRAIN C57BL/6
                   J CLONE WQ2J9-7 GENE CYP2J9)/CN
E6           1     ARACHIDONIC ACID .OMEGA.-1-HYDROXYLASE/CN
E7           1     ARACHIDONIC ACID .OMEGA.-HYDROXYLASE/CN
```

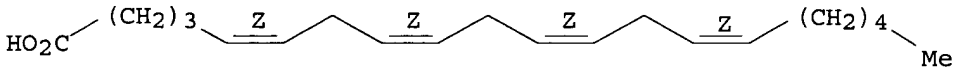
```
E8            1     ARACHIDONIC ACID 12S-LIPOXYGENASE/CN
E9            1     ARACHIDONIC ACID 15-LIPOXYGENASE/CN
E10           1     ARACHIDONIC ACID 18(R)-HYDROXYLASE/CN
E11           1     ARACHIDONIC ACID 5-LIPOXYGENASE/CN
E12           1     ARACHIDONIC ACID ANHYDRIDE/CN

=> s e3
L4            1 "ARACHIDONIC ACID"/CN

=> d l4

L4   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   506-32-1  REGISTRY
CN   5,8,11,14-Eicosatetraenoic acid, (5Z,8Z,11Z,14Z)- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   5,8,11,14-Eicosatetraenoic acid, (all-Z)- (8CI)
OTHER NAMES:
CN   (all-Z)-5,8,11,14-Eicosatetraenoic acid
CN   5,8,11,14-all-cis-Eicosatetraenoic acid
CN   5-cis,8-cis,11-cis,14-cis-Eicosatetraenoic acid
CN   5Z,8Z,11Z,14Z-Eicosatetraenoic acid
CN   all-cis-5,8,11,14-Eicosatetraenoic acid
CN   arachidonate
CN   Arachidonic acid
CN   cis-.DELTA.5,8,11,14-Eicosatetraenoic acid
FS   STEREOSEARCH
DR   10417-93-3, 929-92-0
MF   C20 H32 O2
CI   COM
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
       BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
       CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*,
       DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA,
       MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, TOXCENTER,
       USPAT2, USPATFULL, VETU, VTB
         (*File contains numerically searchable property data)
     Other Sources:   EINECS**
         (**Enter CHEMLIST File for up-to-date regulatory information)

Double bond geometry as shown.
```

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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

           25817 REFERENCES IN FILE CA (1957 TO DATE)
            2187 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
           25852 REFERENCES IN FILE CAPLUS (1957 TO DATE)
             132 REFERENCES IN FILE CAOLD (PRIOR TO 1967)


=> e docsohexenoic acid/cn
E1            1     DOCP/CN
E2            1     DOCR 1/CN
E3            0 --> DOCSOHEXENOIC ACID/CN
E4            1     DOCTRIL/CN
E5            1     DOCUSATE CALCIUM/CN
E6            1     DOCUSATE POTASSIUM/CN
```

```
E7          1      DOCUSATE SODIUM/CN
E8          1      DOD/CN
E9          1      DOD (PASTEURELLA MULTOCIDA STRAIN IL1403 CLONE PM70 GENE DOD
                   -1)/CN
E10         1      DOD (PASTEURELLA MULTOCIDA STRAIN IL1403 CLONE PM70 GENE DOD
                   -2)/CN
E11         1      DODA 501/CN
E12         1      DODA(BR)/CN

=> e docosohexenoic acid/cn
E1          1      DOCOSENYL PALMITOLEATE/CN
E2          1      DOCOSENYLSUCCINIC ANHYDRIDE/CN
E3          0 --> DOCOSOHEXENOIC ACID/CN
E4          1      DOCOSONIC ACID, 2,3,6,9,12,15,18,21,22-NONADEOXY-4,5,7,8,10,
                   11,13,14,16,17,19,20-DODECA-O-METHYL-, METHYL ESTER/CN
E5          1      DOCOSYL 4-AMINOBENZOATE/CN
E6          1      DOCOSYL ACETATE/CN
E7          1      DOCOSYL ACRYLATE/CN
E8          1      DOCOSYL ACRYLATE POLYMER/CN
E9          1      DOCOSYL ACRYLATE-1-VINYLIMIDAZOLE COPOLYMER/CN
E10         1      DOCOSYL ACRYLATE-2-(DIMETHYLAMINO)ETHYL ACRYLATE COPOLYMER/C
                   N
E11         1      DOCOSYL ACRYLATE-2-HYDROXYETHYL ACRYLATE-STYRENE COPOLYMER/C
                   N
E12         1      DOCOSYL ACRYLATE-2-HYDROXYETHYL ACRYLATE-STYRENE COPOLYMER M
                   ALEATE/CN

=> e docosahexenoic acid/cn
E1          1      DOCOSAHEXAENOYL CHLORIDE, (ALL-Z)-/CN
E2          1      DOCOSAHEXAENOYL COA SYNTHETASE/CN
E3          0 --> DOCOSAHEXENOIC ACID/CN
E4          1      DOCOSAISOPROPOXYDECATITANOXANE/CN
E5          1      DOCOSALENE/CN
E6          1      DOCOSALENE, 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,
                   20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,
                   40-TETRACONTAHYDRO-/CN
E7          1      DOCOSALENE, 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,
                   20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,
                   40-TETRACONTAHYDRO-, (E)-/CN
E8          1      DOCOSALENE, 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,
                   20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,
                   40-TETRACONTAHYDRO-, (Z)-/CN
E9          1      DOCOSAMETHYLCYCLOUNDECASILOXANE/CN
E10         1      DOCOSAMETHYLDECAGERMANE/CN
E11         1      DOCOSAMETHYLDECASILANE/CN
E12         1      DOCOSAMETHYLDECASILOXANE/CN

=> e cytidine/cn
E1          1      CYTHOCHROME CYP39A1/CN
E2          1      CYTICHOLINE/CN
E3          1 --> CYTIDINE/CN
E4          3      CYTIDINE (2'-DEOXYCYTIDYLYL-(3'.FWDARW.5')-2'-DEOXYADENYLYL-
                   (3'.FWDARW.5')-2'-DEOXYADENYLYL-(3'.FWDARW.5')-2'-DEOXYADENY
                   LYL-(3'.FWDARW.5')-2'-DEOXYADENYLYL-(3'.FWDARW.5')-2'-DEOXYA
                   DENYLYL-(3'.FWDARW.5/CN
E5          1      CYTIDINE (TETRAHYDROGEN TRIPHOSPHATE), 5-CHLORO-/CN
E6          1      CYTIDINE 2',3'-CYCLIC MONOPHOSPHATE/CN
E7          1      CYTIDINE 2',3'-CYCLIC PHOSPHATE SODIUM SALT/CN
E8          1      CYTIDINE 2',3'-CYCLOPHOSPHATE/CN
E9          1      CYTIDINE 2',3'-DIPHOSPHATE/CN
E10         1      CYTIDINE 2',3'-DISULFATE DISODIUM SALT/CN
E11         1      CYTIDINE 2',3'-PHOSPHATE (CYCLIC) 5'-MORPHOLINOPHOSPHONATE/C
                   N
E12         1      CYTIDINE 2',3'-PHOSPHATE (CYCLIC) 5'-MORPHOLINOPHOSPHONATE,
```

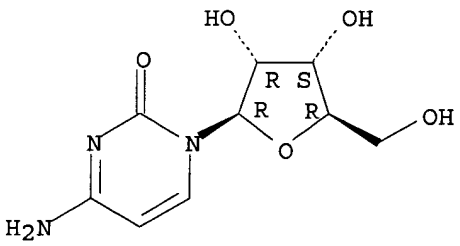
COMPD. WITH N,N'-DICYCLOHEXYL-4-MORPHOLINECARBOXAMIDINE/CN

```
=> s e3
L5            1 CYTIDINE/CN

=> d l5

L5   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   65-46-3  REGISTRY
CN   Cytidine (8CI, 9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Cytosine, 1-.beta.-D-ribosyl- (6CI)
OTHER NAMES:
CN   .beta.-D-Ribofuranoside, cytosine-1
CN   1-(.beta.-D-Ribofuranosyl)-2-oxo-4-amino-1,2-dihydro-1,3-diazine
CN   1-.beta.-D-Ribofuranosylcytosine
CN   2(1H)-Pyrimidinone, 4-amino-1-.beta.-D-ribofuranosyl-
CN   4-Amino-1-.beta.-D-ribofuranosyl-2(1H)-pyrimidinone
CN   Cytosine riboside
FS   STEREOSEARCH
DR   4395-95-3, 494210-74-1
MF   C9 H13 N3 O5
CI   COM
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
       BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS,
       CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE,
       GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS,
       NIOSHTIC, PHARMASEARCH, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER,
       USPAT2, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources:   DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.
```

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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

            3727 REFERENCES IN FILE CA (1957 TO DATE)
             201 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            3727 REFERENCES IN FILE CAPLUS (1957 TO DATE)
              50 REFERENCES IN FILE CAOLD (PRIOR TO 1967)


=> e uridine/cn
E1            1     URIDIN-5'-O-YL, 2'-DEOXY-/CN
E2            1     URIDINAL/CN
E3            1 --> URIDINE/CN
E4            1     URIDINE (CYTIDYLYL-(3'.FWDARW.5')-CYTIDYLYL-(3'.FWDARW.5')-C
                    YTIDYLYL-(3'.FWDARW.5')-GUANYLYL-(3'.FWDARW.5')-)/CN
E5            1     URIDINE (CYTIDYLYL-(3'.FWDARW.5')-URIDYLYL-(3'.FWDARW.5')-CY
```

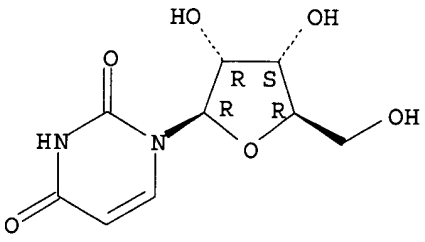
```
                    TIDYLYL-(3'.FWDARW.5')-GUANYLYL-(3'.FWDARW.5')-URIDYLYL-(3'.
                    FWDARW.5')-GUANYLYL-(3'.FWDARW.5')-)/CN
E6          1       URIDINE (URIDYLYL-(2'.FWDARW.5')-URIDYLYL-(2'.FWDARW.5')-URI
                    DYLYL-(2'.FWDARW.5')-URIDYLYL-(2'.FWDARW.5')-URIDYLYL-(2'.FW
                    DARW.5')-URIDYLYL-(2'.FWDARW.5')-URIDYLYL-(2'.FWDARW.5')-)/C
                    N
E7          1       URIDINE 2',3'-ACETONIDE/CN
E8          1       URIDINE 2',3'-CYCLIC MONOPHOSPHATE/CN
E9          1       URIDINE 2',3'-CYCLIC PHOSPHOROTHIOATE/CN
E10         1       URIDINE 2',3'-CYCLOPHOSPHATE/CN
E11         1       URIDINE 2',3'-DIACETATE 5'-PHOSPHATE/CN
E12         1       URIDINE 2',3'-DIACETATE 5'-TRIPHOSPHATE/CN

=> s e3
L6          1 URIDINE/CN

=> d l6

L6   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   58-96-8  REGISTRY
CN   Uridine (8CI, 9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Uracil, 1-.beta.-D-ribofuranosyl- (7CI)
OTHER NAMES:
CN   .beta.-D-Ribofuranoside, 2,4(1H,3H)-pyrimidinedione-1
CN   .beta.-Uridine
CN   1-.beta.-D-Ribofuranosyl-2,4(1H,3H)-pyrimidinedione
CN   1-.beta.-D-Ribofuranosyluracil
CN   Uridin
FS   STEREOSEARCH
DR   12693-39-9, 68184-15-6
MF   C9 H12 N2 O6
CI   COM
LC   STN Files:   ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*,
       BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS,
       CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM,
       DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB,
       IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PHAR, PIRA, PROMT,
       RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources:   DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.
```

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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

            5841 REFERENCES IN FILE CA (1957 TO DATE)
             333 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            5844 REFERENCES IN FILE CAPLUS (1957 TO DATE)
```

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

```
=> e choline/cn
E1            1     CHOLIMED/CN
E2            1     CHOLIN-TRANSPORTING PROTEIN (RATTUS NORVEGICUS)/CN
E3            1 --> CHOLINE/CN
E4            1     CHOLINE (.+-.)-2-TRANS-1,2-CYCLOHEXANEDICARBOXYLATE/CN
E5            1     CHOLINE .ALPHA.,.ALPHA.-DIPROPYLACETATE/CN
E6            1     CHOLINE 2,6-XYLYL ETHER/CN
E7            1     CHOLINE 2,6-XYLYL ETHER BROMIDE/CN
E8            1     CHOLINE 2-NAPHTHOATE/CN
E9            1     CHOLINE 2-PENTENOATE, 2,2',4,4',6,6'-HEXANITRODIPHENYLAMINE
                    DERIV./CN
E10           1     CHOLINE 2-PHENYLBUTYRATE/CN
E11           1     CHOLINE 3.BETA.-HYDROXY-11-OXOOLEAN-12-EN-30-OATE/CN
E12           1     CHOLINE 4-HYDROXYBENZENESULFONATE/CN

=> s e3
L7            1 CHOLINE/CN

=> d l7

L7   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS
RN   62-49-7  REGISTRY
CN   Ethanaminium, 2-hydroxy-N,N,N-trimethyl- (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Choline (8CI)
OTHER NAMES:
CN   (2-Hydroxyethyl)trimethylammonium
CN   Bilineurine
CN   Choline cation
CN   Choline ion
FS   3D CONCORD
DR   139741-81-4
MF   C5 H14 N O
CI   COM
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
       BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN,
       CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DIOGENES, DRUGU, EMBASE,
       GMELIN*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS,
       NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, TULSA, USAN,
       USPAT2, USPATFULL, VETU
         (*File contains numerically searchable property data)
     Other Sources:   DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)
```

$Me_3{}^+N-CH_2-CH_2-OH$

```
          10214 REFERENCES IN FILE CA (1957 TO DATE)
            389 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
          10223 REFERENCES IN FILE CAPLUS (1957 TO DATE)
              3 REFERENCES IN FILE CAOLD (PRIOR TO 1967)


=> file ca
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                 ENTRY    SESSION
FULL ESTIMATED COST                              44.50      44.71

FILE 'CA' ENTERED AT 11:41:03 ON 12 MAY 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
```

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 8 May 2003 VOL 138 ISS 20
FILE LAST UPDATED: 8 May 2003 (20030508/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s l1
L8          788 L1

=> s l2
L9        28491 L2

=> s l3
L10       14770 L3

=> s l4
L11       25848 L4

=> s l5
L12        3739 L5

=> s l6
L13        5881 L6

=> s l7
L14       10274 L7

=> s l8 or citicolin####
             96 CITICOLIN####
L15         793 L8 OR CITICOLIN####

=> s l12 or l13 or l14 or (cytidin##### or uridin###### or cholin#####)
          11436 CYTIDIN#####
          25663 URIDIN######
          80022 CHOLIN#####
L16      113229 L12 OR L13 OR L14 OR (CYTIDIN##### OR URIDIN###### OR CHOLIN####
                #)

=> s l15 and l16
L17         691 L15 AND L16

=> s l17/((BCP) or (BPR) or (PAC) or (PKT) or (THU))
MISSING OPERATOR L17/((BCP
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l17/(THU)
MISSING OPERATOR L17/(THU
The search profile that was entered contains terms or
```

nested terms that are not separated by a logical operator.

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=> s l17 and (memory or cogniti#######)
         75616 MEMORY
         10814 COGNITI#######
L18         25 L17 AND (MEMORY OR COGNITI#######)

=>

=> s l9 or l10 or l11
L19      48597 L9 OR L10 OR L11

=> s l19 and l15
L20         18 L19 AND L15

=> s l20 or l18
L21         43 L20 OR L18

=> s l21 and (AD or alzheimer####)
         35562 AD
         24392 ALZHEIMER####
L22          9 L21 AND (AD OR ALZHEIMER####)

=>

=> d l22 1-9 bib,ab

L22  ANSWER 1 OF 9  CA  COPYRIGHT 2003 ACS
AN   138:117673  CA
TI   Tetracycline compounds having target therapeutic activities
IN   Levy, Stuart B.; Draper, Michael; Nelson, Mark L.; Jones, Graham
PA   Paratek Pharmaceuticals, Inc., USA
SO   PCT Int. Appl., 158 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
PI   WO 2003005971     A2    20030123       WO 2002-US22451  20020715
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
             CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
             NE, SN, TD, TG
PRAI US 2001-305546P   P    20010713
OS   MARPAT 138:117673
AB   Methods and compds. for treating a variety of diseases with tetracycline
     compds. having a target therapeutic activity are described, as is compd.
     prepn.

L22  ANSWER 2 OF 9  CA  COPYRIGHT 2003 ACS
AN   137:56694  CA
TI   Treatment of cognitive dysfunction associated with
     Alzheimer's disease with cholinergic precursors.
     Ineffective treatments or inappropriate approaches?
AU   Amenta, F.; Parnetti, L.; Gallai, V.; Wallin, A.
CS   Department of Pharmacological Sciences and Experimental Medicine, Clinical
     Research Unit, University of Camerino, Camerino, 62032, Italy
```

IL03/00071

50,390467

1/4/13711

US01/43711

SO Mechanisms of Ageing and Development (2001), 122(16), 2025-2040
CODEN: MAGDA3; ISSN: 0047-6374
PB Elsevier Science Ireland Ltd.
DT Journal; General Review
LA English
AB A review. The observations of the loss of **cholinergic** function in neocortex and hippocampus in **Alzheimer**'s disease (**AD**) developed the hypothesis that replacement of **cholinergic** function may be of therapeutic benefit to **AD** patients. The different approaches proposed or tested included intervention with acetylcholine (ACh) precursors, stimulation of ACh release, use of muscarinic or nicotinic receptor agonists and acetylcholinesterase (AChE) or cholinesterase (ChE) inhibition. Inhibition of endogenous ACh degrdn. through ChE inhibitors and precursor loading were treatments more largely investigated in clin. trials. Of the numerous compds. in development for the treatment of **AD**, AChE and ChE inhibitors are the most clin. advanced, although clin. trials conducted to date did not always confirm a significant benefit of these drugs on all symptom domains of **AD**. The first attempts in the treatment of **AD** with **cholinergic** precursors did not confirm a clin. utility of this class of compds. in well controlled clin. trials. However, **cholinergic** precursors most largely used such as **choline** and phosphatidylcholine (lecithin) were probably not suitable for enhancing brain levels of ACh. Other phospholipids involved in **choline** biosynthetic pathways such as CDP-**choline**, **choline** alphoscerate and phosphatidylserine clearly enhanced ACh availability or release and provided a modest improvement of **cognitive** dysfunction in **AD**, these effects being more pronounced with **choline** alphoscerate. Although some pos. results cannot be generalized due to the small nos. of patients studied, they probably would justify reconsideration of the most promising mols. in larger carefully controlled trials.
RE.CNT 85 THERE ARE 85 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 3 OF 9 CA COPYRIGHT 2003 ACS
AN 136:335248 CA
TI Pyrimidine nucleotide precursors for the treatment of mitochondrial diseases
IN Von Borstel, Reid W.; Saydoff, Joel A.
PA USA
SO U.S. Pat. Appl. Publ., 39 pp., Cont.-in-part of U. S. Ser. No. 763,955.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002049182	A1	20020425	US 2001-930494	20010816
US 2001005719	A1	20010628	US 1998-144096	19980831
US 6472378	B2	20021029		
WO 2000011952	A1	20000309	WO 1999-US19725	19990831
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
WO 2003015516	A1	20030227	WO 2002-US25831	20020814
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,				

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 1998-144096 A2 19980831
WO 1999-US19725 W 19990831
US 2001-763955 A2 20010228
US 2001-930494 A 20010816

AB Compds., compns., and methods are provided for the treatment of disorders related to mitochondrial dysfunction. The methods comprise administering to a mammal a compn. contg. pyrimidine nucleotide precursors in amts. sufficient to treat symptoms resulting from mitochondrial respiratory chain deficiencies.

L22 ANSWER 4 OF 9 CA COPYRIGHT 2003 ACS
AN 132:203149 CA
TI Compositions and methods using pyrimidine nucleotide precursors for treatment of mitochondrial diseases
IN Von Borstel, Reid W.
PA Pro-Neuron, Inc., USA
SO PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2000011952	A1	20000309	WO 1999-US19725	19990831
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2001005719	A1	20010628	US 1998-144096	19980831
US 6472378	B2	20021029		
CA 2341700	AA	20000309	CA 1999-2341700	19990831
AU 9960219	A1	20000321	AU 1999-60219	19990831
AU 753203	B2	20021010		
BR 9913319	A	20010522	BR 1999-13319	19990831
EP 1109453	A1	20010627	EP 1999-968207	19990831
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002523434	T2	20020730	JP 2000-567085	19990831
ZA 2001001565	A	20020515	ZA 2001-1565	20010226
US 2001016576	A1	20010823	US 2001-838136	20010420
US 2002049182	A1	20020425	US 2001-930494	20010816

PRAI US 1998-144096 A2 19980831
WO 1999-US19725 W 19990831
US 2001-763955 A2 20010228

AB Compds., compns., and methods are provided for treatment of disorders related to mitochondrial dysfunction. The methods comprise administering to a mammal a compn. contg. pyrimidine nucleotide precursors in amts. sufficient to treat symptoms resulting from mitochondrial respiratory chain deficiencies.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

L22 ANSWER 6 OF 9 CA COPYRIGHT 2003 ACS
AN 125:1166 CA
TI Therapeutic effects of CDP-**choline** in **Alzheimer**'s disease: **cognition**, brain mapping, cerebrovascular hemodynamics, and immune factors
AU Cacabelos, R.; Caamano, J.; Gomez, M. J.; Fernandez-Novoa, L.; Franco-Maside, A.; Alvarez, X. A.
CS Basic and Clinical Neurosciences Research Center, Institute for CNS Disorders, La Coruna, 15080, Spain
SO Annals of the New York Academy of Sciences (1996), 777(Neurobiology of Alzheimers Disease), 399-403
CODEN: ANYAA9; ISSN: 0077-8923
PB New York Academy of Sciences
DT Journal
LA English
AB CDP-**choline** was given to patients with **Alzheimer**'s disease (**AD**) at a daily dose of 1000 mg/day p.o. for one month. This compd. slightly improved mental performance, tended to reduce theta activity in fronto-temporal regions, increasing alpha power in occipital areas, and enhanced cerebrovascular perfusion by increasing blood flow velocity and reducing pulsatility and resistance indexes. In addn., CDP-**choline** diminished histamine and interleukin-1 levels in blood and serum, resp., and increased plasma TNF.

L22 ANSWER 7 OF 9 CA COPYRIGHT 2003 ACS
AN 122:95713 CA
TI Metabolism and actions of CDP-**choline** as an endogenous compound and administered exogenously as **citicoline**
AU Weiss, George B.
CS M. Hurley & Associates, Inc., Murray Hill, NJ, 07947-1584, USA
SO Life Sciences (1995), 56(9), 637-60
CODEN: LIFSAK; ISSN: 0024-3205
PB Elsevier
DT Journal; General Review
LA English
AB A review with 184 refs. CDP-**choline**, supplied exogenously as **citicoline**, has beneficial physiol. actions on cellular function that have been extensively studied and characterized in numerous model systems. As the product of the rate-limiting step in the synthesis of phosphatidylcholine from **choline**, CDP-**choline** and its hydrolysis products (**cytidine** and **choline**) play important roles in generation of phospholipids involved in membrane formation and repair. They also contribute to such crit. metabolic functions as formation of nucleic acids, proteins, and acetylcholine. Orally-administered **citicoline** is hydrolyzed in the intestine, absorbed rapidly as **choline** and **cytidine**, resynthesized in liver and other tissues, and subsequently mobilized in CDP-**choline** synthetic pathways. **Citicoline** is efficiently utilized in brain cells for membrane lipid synthesis where it not only increases phospholipid synthesis but also inhibits phospholipid degrdn. Exogenously administered **citicoline** prevents, reduces, or reverses effects of ischemia and/or hypoxia in most animal and cellular models studied, and acts in heat trauma models to decrease and limit nerve cell membrane damage, restore intracellular regulatory enzyme sensitivity and function, and limit edema. Thus, considerable accumulated evidence supports use of **citicoline** to enhance membrane maintenance, membrane repair, and neuronal function in conditions such as ischemic and traumatic injuries. Beneficial effects of exogenous **citicoline** also have been postulated and/or reported in exptl. models for dyskinesia, Parkinson's disease, aging, **Alzheimer**'s disease, learning and **memory**, and **cholinergic** stimulation.

L22 ANSWER 8 OF 9 CA COPYRIGHT 2003 ACS
AN 121:148887 CA

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 5 OF 9 CA COPYRIGHT 2003 ACS
AN 132:102759 CA
TI Double-blind placebo-controlled study with **citicoline** in APOE genotyped **Alzheimer**'s disease patients. Effects on **cognitive** performance, brain bioelectrical activity and cerebral perfusion
AU Alvarez, X. A.; Mouzo, R.; Pichel, V.; Perez, P.; Laredo, M.; Fernandez-Novoa, L.; Corzo, L.; Zas, R.; Alcaraz, M.; Secades, J. J.; Lozano, R.; Cacabelos, R.
CS EuroEspes Biomedical Research Center, Barcelona, Spain
SO Methods and Findings in Experimental and Clinical Pharmacology (1999), 21(9), 633-644
CODEN: MFEPDX; ISSN: 0379-0355
PB Prous Science
DT Journal
LA English
AB **Cytidine** 5'-diphosphocholine (**citicoline**) is a an endogenous intermediate in the biosynthesis of structural membrane phospholipids and brain acetylcholine. **Citicoline** has been extensively used for the treatment of neurodegenerative disorders assocd. with head trauma, stroke, brain aging, cerebrovascular pathol. and **Alzheimer**'s disease. In this study we have investigated the efficacy and safety of the treatment with **citicoline** vs. placebo in patients with **Alzheimer** disease. Thirty patients (age = 73.0.+-.8.5 yr; range = 57-87 yr) with mild to moderate senile dementia (GDS: stages 3-6) of the **Alzheimer** type were included in a double-blind, randomized and placebo-controlled clin. trial. After a 2-wk period of drug washout, patients were treated with (i) placebo (n = 17; age = 73.+-.5 yr) or (ii) 1,000 mg/day of **citicoline** (n = 13; age = 76.+-.9 yr) for 12 wk (84 days). Examns. were done at baseline (T0) and after the 12 wk of treatment (T12). As compared to placebo, **citicoline** improved **cognitive** performance in **Alzheimer**'s disease patients with APOE E4 (ADAS: difference between groups = -3.2.+-.1.8 scores, $p < 0.05$; ADAS-cog: difference between groups = -2.3.+-.1.5, ns); and this improvement on **cognition** was more pronounced (ADAS, $p < 0.01$; ADAS-cog: difference between groups = -2.8.+-.1.3, $p < 0.06$) in patients with mild dementia (GDS < 5). **Citicoline** also increased cerebral blood flow velocities in comparison with placebo ($p < 0.05$) when transcranial Doppler recordings from both hemispheres were considered together, as well as diastolic velocity in the left middle cerebral artery ($p < 0.05$). Patients treated with **citicoline** showed an increase in the percentage of brain bioelec. activity of .alpha. (occipital electrodes) and .THETA. type (left side electrodes), accompanied by a decrease in relative delta activity particularly marked in the left temporal lobe. Significant differences with respect to placebo ($p < 0.05$) were obsd. for .THETA. activity in several fronto-parieto-temporal electrodes of the left hemisphere. Treatment with **citicoline** tended to reduce serum IL-1.beta. levels, mainly after 4 wk of administration, with no modified blood histamine content. In addn., neither adverse side effects nor alterations in biol. and hematol. parameters were induced by **citicoline**. The present data indicate that **citicoline** (1.000 mg/day) is well tolerated and improves **cognitive** performance, cerebral blood perfusion and the brain bioelec. activity pattern in **AD** patients. According to our results, it seems that **citicoline** might be a useful treatment in **Alzheimer**'s disease, and that the efficacy of this compd. is greater in patients with mild mental deterioration and/or bearing the .epsilon.4 allele of the APOE.
RE.CNT 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Effects of CDP-**choline** on **cognition** and cerebral hemodynamics in patients with **Alzheimer**'s disease
AU Caamano, J.; Gomez, M.J.; Franco, A.; Cacabelos, R.
CS Basic Clin. Neurosci. Res. Cent., Inst. C.N.S. Dis., La Coruna, Spain
SO Methods and Findings in Experimental and Clinical Pharmacology (1994), 16(3), 211-18
CODEN: MFEPDX; ISSN: 0379-0355
DT Journal
LA English
AB CDP-**choline** (**cytidine**-5-diphosphate-**choline**) is an acetylcholine precursor frequently used in cerebrovascular disorders and psychoorg. syndromes. Furthermore, several authors have demonstrated the pos. effects of CDP-**choline** on **cognitive** disorders and **memory** deficits. In the present study, the effects of CDP-**choline** (1000 mg/day, p.o. for 1 mo) on **cognition**, evaluated by the Mini-Mental State Examn. (MMSE) of Folstein et al., and on blood flow velocities, measured by transcranial Doppler ultrasonog. (TCD), were investigated in patients with **Alzheimer**'s disease: (**AD**, n = 20, age: 66.75 +/-6.73 yr, range: 57-78 yr). **Cognitive** function was measured by means of the MMSE in basal conditions (A) and after 1 mo of treatment with CDP-**choline** (C). TCD measures were taken through the temporal window for right (MCA-R) and left (MCA-L) middle cerebral arteries with a 2 MHz pulsed transducer using a TC-2000S in basal conditions (A), 1 h after the administration of CDP-**choline** (B) and after 1 mo of treatment with CDP-**choline** (C). MMSE scores were significantly increased ($p < 0.005$) in patients with early-onset **Alzheimer**'s disease (EOAD) after CDP-**choline** treatment. Moreover, the orientation subtest significantly increased in the global group of **AD** patients ($p < 0.01$) and in EOAD patients ($p < 0.02$). Significant differences ($p < 0.05$) were also found in MCA-L and MCA-R measures between recordings. These results suggest that CDP-**choline** influences **cognitive** and cerebrovascular function in **Alzheimer**'s disease, probably through a mechanism linked to an immunogenic and/or neurotrophic effect at the microvascular niche. However, a direct vasoactive effect on the vascular endothelium cannot be ruled out.

L22 ANSWER 9 OF 9 CA COPYRIGHT 2003 ACS
AN 119:217138 CA
TI Influence of CDP-**choline** on **cognition** and interleukin-1.beta. in **Alzheimer**'s disease and multi-infarct dementia
AU Cacabelos, R.; Alvarez, X. A.; Franco-Maside, A.; Fernandez-Novoa, L.; Caamano, J.
CS Basic Clin. Neurosci. Res. Cent., Inst. CNS Disord., La Coruna, 15080, Spain
SO Advances in the Biosciences (Oxford) (1993), 87(Alzheimer's Disease and Related Disorders), 347-8
CODEN: AVBIB9; ISSN: 0065-3446
DT Journal
LA English
AB CDP-**choline** (**cytidine**-5-diphosphate **choline**) seems suitable for treatment of senile dementia. The redn. in the levels of serum interleukin-1.beta. induced by CDP-**choline** might represent an indirect indicator of the neuroprotecting effect of this compd. and/or its capability for modulating immunogenesis.

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	39.42	84.13

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL

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                                                      ENTRY     SESSION
CA SUBSCRIBER PRICE                                   -5.58       -5.58

FILE 'CAPLUS' ENTERED AT 11:49:39 ON 12 MAY 2003
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FILE COVERS 1907 - 12 May 2003  VOL 138 ISS 20
FILE LAST UPDATED: 11 May 2003  (20030511/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> d his

     (FILE 'HOME' ENTERED AT 11:35:25 ON 12 MAY 2003)

     FILE 'REGISTRY' ENTERED AT 11:36:01 ON 12 MAY 2003
                E CITICOLINE/CN
L1            1 S E3
                E LINOLEIC ACID/CN
L2            1 S E3
                E LINOLENIC ACID/CN
L3            1 S E3
                E ARACHIDONIC ACID/CN
L4            1 S E3
                E DOCSOHEXENOIC ACID/CN
                E DOCOSOHEXENOIC ACID/CN
                E DOCOSAHEXENOIC ACID/CN
                E CYTIDINE/CN
L5            1 S E3
                E URIDINE/CN
L6            1 S E3
                E CHOLINE/CN
L7            1 S E3

     FILE 'CA' ENTERED AT 11:41:03 ON 12 MAY 2003
L8          788 S L1
L9        28491 S L2
L10       14770 S L3
L11       25848 S L4
L12        3739 S L5
L13        5881 S L6
L14       10274 S L7
L15         793 S L8 OR CITICOLIN####
L16      113229 S L12 OR L13 OR L14 OR (CYTIDIN##### OR URIDIN###### OR CHOLIN#
L17         691 S L15 AND L16
L18          25 S L17 AND (MEMORY OR COGNITI#######)
L19       48597 S L9 OR L10 OR L11
L20          18 S L19 AND L15
L21          43 S L20 OR L18
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```
L22           9 S L21 AND (AD OR ALZHEIMER####)

     FILE 'CAPLUS' ENTERED AT 11:49:39 ON 12 MAY 2003

=> s l15
            788 L1
            103 CITICOLIN####
L23         800 L8 OR CITICOLIN####

=> s l16
           3739 L5
           5884 L6
          10284 L7
          11556 CYTIDIN#####
          25890 URIDIN######
          81038 CHOLIN#####
L24      114550 L12 OR L13 OR L14 OR (CYTIDIN##### OR URIDIN###### OR CHOLIN####
                #)

=> s l23 and l24
L25         694 L23 AND L24

=> s l25/(THU or PKT or PAC or BAC or BPN)
MISSING OPERATOR L25/(THU
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l25 (l) (THU or PKT or PAC or BAC or BPN)
PROXIMITY OPERATOR LEVEL NOT CONSISTENT WITH
FIELD CODE - 'AND' OPERATOR ASSUMED 'L25 (L) '
            130 THU
            120 PKT
           4894 PAC
           3693 BAC
            913 BPN
L26           0 L25 (L) (THU OR PKT OR PAC OR BAC OR BPN)

=> s l25 and (AD or alzheimer####)
          37414 AD
          25883 ALZHEIMER####
L27          12 L25 AND (AD OR ALZHEIMER####)

=> s l22 or l27
          28526 L2
          14788 L3
          25880 L4
            788 L1
            103 CITICOLIN####
            788 L1
            103 CITICOLIN####
           3739 L5
           5884 L6
          10284 L7
          11556 CYTIDIN#####
          25890 URIDIN######
          81038 CHOLIN#####
          86971 MEMORY
          12485 COGNITI#######
          37414 AD
          25883 ALZHEIMER####
L28          12 L22 OR L27

=> s l27 not l22
          28526 L2
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          14788 L3
          25880 L4
            788 L1
            103 CITICOLIN####
            788 L1
            103 CITICOLIN####
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           5884 L6
          10284 L7
          11556 CYTIDIN#####
          25890 URIDIN######
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          86971 MEMORY
          12485 COGNITI#######
          37414 AD
          25883 ALZHEIMER####
L29           3 L27 NOT L22

=> d l29 1-3 bib,ab

L29  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2003 ACS
AN   1997:659205  CAPLUS
DN   127:302799
TI   Treatment of Alzheimer's disease with CDP-choline:
     effects on mental performance, brain electrical activity, cerebrovascular
     parameters and cytokine production
AU   Cacabelos, R.; Caamano, J.; Gomez, M. J.; Fernandez-Novoa, L.;
     Franco-Maside, A.; Vinagre, D.; Novo, B.; Zas, R.; Alvarez, X. A.
CS   Basic and Clinical Neurosciences Research Center, Institute for CNS
     Disorders, La Coruna, Spain
SO   Annals of Psychiatry (1995), 5, 247-267
     CODEN: AASYEW; ISSN: 1135-0776
PB   Prous
DT   Journal; General Review
LA   English
AB   A review with 63 refs.

L29  ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2003 ACS
AN   1986:224005  CAPLUS
DN   104:224005
TI   The inhibitory effect of CDP-choline on development of fatty
     liver induced by prehepatic or central hyperalimentation
AU   Ozaka, Hiromi
CS   2nd Dep. Surg., Tokyo Women's Med. Coll., Tokyo, Japan
SO   Tokyo Joshi Ika Daigaku Zasshi (1985), 55(12), 1053-63
     CODEN: TJIZAF; ISSN: 0040-9022
DT   Journal
LA   Japanese
AB   The ability of CDP-choline (I) [987-78-0] to prevent
     fatty liver induced by prehapatic or central venous hyperalimentation was
     studied. Wistar male rats received prehepatic or central venous
     hyperalimentation consisting of hypertonic dextrose and amino acids
     supplemented with I(150 mg/kg/day) for 7 days. The caloric intake was
     adjusted to 280 kcal/kg/day. Control rats were fed by central venous
     hyperalimentation without I. Another group of rats was allowed to ingest
     a stock diet ad libitum. At sacrifice, hepatic function, serum
     and hepatic lipid content, hepatic fatty acids compn. as well as morphol.
     changes in the liver were compared among the 4 groups of rats. I reduced
     hepatic contents of total lipid, cholesterol [57-88-5], and triglyceride.
     Histol. examn. also revealed the inhibitory effect of I on fat
     accumulation in liver. Hepatic fatty acids compn. was not altered by I.
     There was no difference in the effects of I when the lipotropic agent was
     given through the portal vein or through the central vein. Therefore,
     administration of I may be useful in preventing hepatic lipid accumulation
```

induced by hyperalimentation.

L29 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2003 ACS
AN 1985:481705 CAPLUS
DN 103:81705
TI Therapeutic use of cytidyl diphosphocholine to increase neuronal acetylcholine
IN Growdon, John H.; Wurtman, Richard J.
PA Massachusetts Institute of Technology, USA
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 7

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 147185	A2	19850703	EP 1984-308945	19841220
	EP 147185	A3	19870506		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	US 4569929	A	19860211	US 1983-564607	19831222
	JP 60252416	A2	19851213	JP 1984-270608	19841221
	CA 1248454	A1	19890110	CA 1984-470864	19841221
PRAI	US 1983-564607		19831222		
	US 1977-847967		19771102		
	US 1979-88227		19791025		
	US 1980-126124		19800229		
	US 1981-229894		19810130		
	US 1982-366888		19820408		

AB Administration of cytidyl diphosphocholine (I) [**987-78-0**] alone increases brain **choline** levels, thus indirectly raising acetylcholine [51-84-3] levels. I administered with an antipsychotic drug potentiates the affect of the drug by increasing the acetylcholine levels in the brain or other tissues and/or suppresses or blocks the development of unwanted side effects of the drug. I is also useful in treatment of senility, **Alzheimer**'s disease, tardive diskinesia, Parkinson's disease and other neurol. and behavioral syndromes. I elevated plasma **choline** levels in rats by 50% after 4 h at 2.25 g/kg. In addn., lab. rats were given I at 1.5 g/kg or equimolar **choline** chloride [67-48-1] and killed after 1, 5 and 24 h by focussed microwave irradn. to the head as were controls which were not administered **choline** chloride or I. Whole brain **choline** was elevated relative to controls at all times in both I-treated and **choline**-treated animals. Peak values of **choline** occurred at 5 h. **Choline** levels returned near baseline by 24 h. Since administration of I raises brain **choline**, brain acetylcholine levels also are raised.

```
=> s l1/thu
          788 L1
       507990 THU/RL
L30         99 L1/THU
               (L1 (L) THU/RL)

=> s l1/(thu or bac or pac or pkt)
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nested terms that are not separated by a logical operator.

=> s l1/pkt
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         8318 PKT/RL
L31         2 L1/PKT
               (L1 (L) PKT/RL)
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=> s l1/pac
           788 L1
         62387 PAC/RL
L32         21 L1/PAC
                (L1 (L) PAC/RL)

=> s l1/bac
           788 L1
       1012930 BAC/RL
L33         80 L1/BAC
                (L1 (L) BAC/RL)

=> s l32 or l31 or l30
L34        103 L32 OR L31 OR L30

=> s l33 or l34
L35        133 L33 OR L34

=> s l35 and (AD or memory or alzheimer###)
         37414 AD
         86971 MEMORY
         25882 ALZHEIMER###
L36         17 L35 AND (AD OR MEMORY OR ALZHEIMER###)

=> d his

     (FILE 'HOME' ENTERED AT 11:35:25 ON 12 MAY 2003)

     FILE 'REGISTRY' ENTERED AT 11:36:01 ON 12 MAY 2003
                E CITICOLINE/CN
L1            1 S E3
                E LINOLEIC ACID/CN
L2            1 S E3
                E LINOLENIC ACID/CN
L3            1 S E3
                E ARACHIDONIC ACID/CN
L4            1 S E3
                E DOCSOHEXENOIC ACID/CN
                E DOCOSOHEXENOIC ACID/CN
                E DOCOSAHEXENOIC ACID/CN
                E CYTIDINE/CN
L5            1 S E3
                E URIDINE/CN
L6            1 S E3
                E CHOLINE/CN
L7            1 S E3

     FILE 'CA' ENTERED AT 11:41:03 ON 12 MAY 2003
L8          788 S L1
L9        28491 S L2
L10       14770 S L3
L11       25848 S L4
L12        3739 S L5
L13        5881 S L6
L14       10274 S L7
L15         793 S L8 OR CITICOLIN####
L16      113229 S L12 OR L13 OR L14 OR (CYTIDIN##### OR URIDIN###### OR CHOLIN#
L17         691 S L15 AND L16
L18          25 S L17 AND (MEMORY OR COGNITI########)
L19       48597 S L9 OR L10 OR L11
L20          18 S L19 AND L15
L21          43 S L20 OR L18
L22           9 S L21 AND (AD OR ALZHEIMER####)
```

```
              103 CITICOLIN####
             3739 L5
             5884 L6
            10284 L7
            11556 CYTIDIN#####
            25890 URIDIN######
            81038 CHOLIN#####
            86971 MEMORY
            12485 COGNITI#######
            37414 AD
            25883 ALZHEIMER####
L39             12 L38 NOT L22

=> s s l37 not l 28
MISSING OPERATOR S L37
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s s l37 not l28
MISSING OPERATOR S L37
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l37 not l28
L40              9 L37 NOT L28

=> s l40 not l22
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            14788 L3
            25880 L4
              788 L1
              103 CITICOLIN####
              788 L1
              103 CITICOLIN####
             3739 L5
             5884 L6
            10284 L7
            11556 CYTIDIN#####
            25890 URIDIN######
            81038 CHOLIN#####
            86971 MEMORY
            12485 COGNITI#######
            37414 AD
            25883 ALZHEIMER####
L41              9 L40 NOT L22

=> d l41 1-9 bib,ab

L41  ANSWER 1 OF 9  CAPLUS  COPYRIGHT 2003 ACS
AN   2002:777693  CAPLUS
DN   137:299911
TI   Neuroprotectant formulations
IN   Hesson, David P.; Frazer, Glenn D.; Ross, Douglas
PA   Neuron Therapeutics, Inc., USA
SO   PCT Int. Appl., 28 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND  DATE          APPLICATION NO.  DATE
     ---------------     ----  --------      ---------------  --------
PI   WO 2002078670       A1    20021010      WO 2002-US5885   20020228
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
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     FILE 'CAPLUS' ENTERED AT 11:49:39 ON 12 MAY 2003
L23          800 S L15
L24       114550 S L16
L25          694 S L23 AND L24
L26            0 S L25 (L) (THU OR PKT OR PAC OR BAC OR BPN)
L27           12 S L25 AND (AD OR ALZHEIMER####)
L28           12 S L22 OR L27
L29            3 S L27 NOT L22
L30           99 S L1/THU
L31            2 S L1/PKT
L32           21 S L1/PAC
L33           80 S L1/BAC
L34          103 S L32 OR L31 OR L30
L35          133 S L33 OR L34
L36           17 S L35 AND (AD OR MEMORY OR ALZHEIMER###)

=> s l36 or l22
          28526 L2
          14788 L3
          25880 L4
            788 L1
            103 CITICOLIN####
            788 L1
            103 CITICOLIN####
           3739 L5
           5884 L6
          10284 L7
          11556 CYTIDIN#####
          25890 URIDIN######
          81038 CHOLIN#####
          86971 MEMORY
          12485 COGNITI#######
          37414 AD
          25883 ALZHEIMER####
L37          19 L36 OR L22

=> s l28 or l22 or l36
          28526 L2
          14788 L3
          25880 L4
            788 L1
            103 CITICOLIN####
            788 L1
            103 CITICOLIN####
           3739 L5
           5884 L6
          10284 L7
          11556 CYTIDIN#####
          25890 URIDIN######
          81038 CHOLIN#####
          86971 MEMORY
          12485 COGNITI#######
          37414 AD
          25883 ALZHEIMER####
L38          21 L28 OR L22 OR L36

=> s l38 not l22
          28526 L2
          14788 L3
          25880 L4
            788 L1
            103 CITICOLIN####
            788 L1
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2002193285 A1 20021219 US 2002-90441 20020304
PRAI US 2001-331360P P 20010302
US 2001-798880 A 20010302

AB A method of treating an animal that has suffered damage to cerebrospinal tissue or that has an indication creating a risk of damage to cerebrospinal tissue, comprises injecting a physiol. acceptable cerebrospinal perfusion fluid into a first catheter into the cerebrospinal pathway. The cerebrospinal perfusion fluid has a neuroprotecting effective amt. of a neuroprotectant, withdrawing fluid at a second catheter into the cerebrospinal pathway to create a flow and flow pathway between the first and second catheters and c. maintaining the flow for a period of time adapted to perfuse an affected tissue.

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 2002:88594 CAPLUS
DN 137:163049
TI Citicoline Ferrer Internacional
AU Alexandrov, Andrei V.
CS Department of Neurology, University of Texas, Houston, TX, 77030, USA
SO Current Opinion in Investigational Drugs (PharmaPress Ltd.) (2001), 2(12), 1757-1762
CODEN: COIDAZ
PB PharmaPress Ltd.
DT Journal; General Review
LA English
AB A review. Citicoline was originally developed and launched by Ferrer for the treatment of stroke, and is now also being investigated for the potential treatment of **Alzheimer**'s disease (**AD**). In the US, the compd. is being developed by Interneuron for the treatment of stroke. A US launch had been rescheduled for 2002, although a decision on future US development of citicoline was intended to be made in conjunction with Takeda, Interneuron's US licensee. Takeda had decided not to pursue development by Dec. 2000 and was in negotiations with Interneuron for another product candidate. Interneuron stated at this time that it would explore other partnership opportunities for citicoline. In 1993, Interneuron licensed exclusive marketing and manufg. rights to citicoline in the US and Canada from Ferrer. By Sept. 1997, a patent application had been filed worldwide by Interneuron for the use of citicoline in the redn. of cerebral infarct vol., and in Sept. 1998, US-05801160 was issued for citicoline relating to the protection of brain tissue from cerebral infarction following ischemic stroke. In Dec. 1999, US rights to the commercialization of citicoline were licensed to Takeda.

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 2000:98343 CAPLUS
DN 132:132349
TI Methods using uridine or a uridine source for increasing cytidine levels in vivo and treating cytidine-dependent human neurological diseases
IN Watkins, Carol; Wurtman, Richard J.
PA Massachusetts Institute of Technology, USA
SO PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DT Patent

LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000006174	A1	20000210	WO 1999-US17235	19990730
	W: CA, JP				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2339008	AA	20000210	CA 1999-2339008	19990730
	EP 1140104	A1	20011010	EP 1999-937631	19990730
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 2002028787	A1	20020307	US 1999-363748	19990730
PRAI	US 1998-95002P	P	19980731		
	WO 1999-US17235	W	19990730		

AB Methods of treating certain neurol. diseases using exogenous uridine or a uridine source alone as a precursor of endogenous cytidine, particularly in the human brain, are disclosed. Methods are also disclosed in which exogenous uridine or a uridine source is combined either with drugs increasing uridine availability or with compds. that serve as a source of choline in phospholipid synthesis.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 1999:807707 CAPLUS
DN 132:260517
TI Citicoline protects hippocampal neurons against apoptosis induced by brain .beta.-amyloid deposits plus cerebral hypoperfusion in rats
AU Alvarez, X. A.; Sampedro, C.; Lozano, R.; Cacabelos, R.
CS EuroEspes Biomedical Research Center, A Coruna, Barcelona, Spain
SO Methods and Findings in Experimental and Clinical Pharmacology (1999), 21(8), 535-540
CODEN: MFEPDX; ISSN: 0379-0355
PB Prous Science
DT Journal
LA English
AB Citicoline is an endogenous intermediate involved in the biosynthesis of brain phospholipids and acetylcholine which has been extensively used for the treatment of several neurodegenerative conditions. The effects of Citicoline on neurodegeneration, apoptosis, and learning were investigated in male Sprague-Dawley rats subjected to implants of the .beta.-amyloid fragment 1-40 (A.beta.4; 3 mmol) into the right hippocampus and to permanent unilateral occlusion of the carotid artery. Citicoline (CDP; 0, 62.5, 125, and 250 mg/kg/day, i.p.) was given during 2 days before and for 5 days after surgery, and the extension of the degeneration and the no. of apoptotic figures (TUNEL technique) were evaluated in the dentate gyrus (DG) and the CA1 area of the hippocampus. Citicoline, at 125 and 250 mg/kg, reduced the no. of apoptotic neurons in the hippocampus of rats with A.beta.4/hypoperfusion-induced neurodegeneration (CDP0 = 105.3 .+-. 32.8 apoptotic figures: CDP125 = 39.2 .+-. 7.4 apoptotic figures: CDP250 = 34.5 .+-. 14.4 apoptotic figures: $p < 0.01$ vs. CDP0). CDP also reduced neuronal degeneration in the CA1 area in a dose-dependent manner (CDP0 = 450.5 .+-. 130.1 .mu.m: CDP62.5 = 280.6 .+-. 76.3 .mu.m: CDP125 = 86.6 .+-. 37.3 .mu.m: CDP250 = 121.7 .+-. 85.3 .mu.m: $p < 0.05$ vs. CDP0). Variability of results was very high in the DG, where a significant redn. in the extent of neurodegeneration was only obsd. in the group of rats receiving 62.5 mg/kg Citicoline. Finally, Citicoline improved the retention of a passive avoidance learning task, increasing the no. of avoidances (Av) (CDP0 = 4.2 .+-. 0.7 Av: CDP62.5 = 6.9 .+-. 1.0 Av: CDP125 = 7.9 .+-. 0.7 Av: CDP250 = 8.5 .+-. 0.6 Av: $p < 0.01$ vs. CDP0) in a dose-related manner. Based on these results, it was concluded that Citicoline exerts antiapoptotic, neuroprotective, and antiamnesic effects in conditions of neurodegeneration induced by A.beta.4 plus hypoperfusion.

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 1998:688489 CAPLUS
DN 130:120558
TI Monoxide poisoning delayed encephalopathy
AU Liu, Zhiying; Jia, Liming; Zhang, Gaiying
CS 264 Hospital of PLA, Taiyuan, 030001, Peop. Rep. China
SO Shanxi Yiyao Zazhi (1998), 27(4), 371-372
CODEN: SIYCDB; ISSN: 0253-9926
PB Shanxi Yiyao Zazhi Bianjibu
DT Journal
LA Chinese
AB Twenty-six patients with CO poisoning delayed encephalopathy were analyzed. They had definite history of CO poisoning coma, and the coma extended 5 h to 80 h with an interposed conscious period of 3 d to 34 d. Twenty-two cases manifested decreased **memory**, sluggish and dementia, 2 cases were progressed to vegetable status; language disorders, decreased visual acuity. EEG demonstrated diffused severe abnormality in 18 cases and moderate abnormality in 8 cases. All 26 patients performed CT and demonstrated white matter sym. low d. areas with obvious edema. Treatment included initial large dose dexamethasone, nicotinic acid, citicoline and DaLaKang. Fourteen cases were cured and 10 cases marked effective, and 2 cases were noneffective. The results suggest that the early detection and management of delayed CO encephalopathy is important, and monitoring of EEG is useful in detection.

L41 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 1998:93107 CAPLUS
DN 128:213265
TI Facilitatory effects of chronically administered citicoline on learning and **memory** processes in the dog
AU Bruhwyler, Jacques; Liegeois, Jean-Francois; Geczy, Joseph
CS Therabel Research s.a., Research, Development and Biostatistics, Brussels, 1180, Belg.
SO Progress in Neuro-Psychopharmacology & Biological Psychiatry (1998), 22(1), 115-128
CODEN: PNPPD7; ISSN: 0278-5846
PB Elsevier Science Inc.
DT Journal
LA English
AB Citicoline (cytidine (5') diphosphocholine) has been shown to reverse aging-induced **memory** deficits, scopolamine-induced amnesia and nucleus basalis magnocellularis lesion-induced learning impairment. This study aimed to evaluate the effects of citicoline on learning and retrieval processes in a complex differential reinforcement of response duration schedule in normal dogs. The effects of citicoline on a stabilized performance were also measured to be able to differentiate specific **memory** effects from non specific influences on the motor, neuro-vegetative and motivational systems. The results demonstrate that citicoline can exert facilitatory effects on learning and **memory** but also on retrieval processes. The complete absence of effects on the stabilized performance and on the motor, neuro-vegetative and motivational systems constitutes arguments in favor of a selectivity of action on the **memory** processes.

L41 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 1998:92997 CAPLUS
DN 128:213262
TI Citicoline antagonizes bromazepam-induced amnesia in rats
AU Alvarez, X. Anton; Vecino, Begona; Perea, Juan Enrique; Daniele, Danilo; Cacabelos, Ramon
CS EuroEspes Biomedical Research Center, A Coruna, 15166, Spain

SO Human Psychopharmacology (1997), 12(6), 547-556
CODEN: HUPSEC; ISSN: 0885-6222
PB John Wiley & Sons Ltd.
DT Journal
LA English
AB Citicoline is an endogenous intermediate in the biosynthesis of brain phospholipids and acetylcholine used for the treatment of neurodegenerative processes assocd. with head trauma, stroke, brain aging, cerebrovascular pathol. and **Alzheimer**'s disease. In this study the authors have investigated the effects of citicoline on acquisition and retention in passive avoidance and spatial discriminative learning tasks in control rats and in bromazepam-treated animals. Interactions of citicoline with bromazepam on exploratory behavior (anxiolytic/sedative activity) and motor co-ordination (myorelaxing activity) were also evaluated to test the specificity of the cognitive effects of citicoline. The authors' results indicate that citicoline reverses bromazepam-induced amnesia, improves retention in control rats, and has no significant effects on spontaneous activity and motor co-ordination when given alone or in combination with bromazepam. According to these results the authors conclude that citicoline acts as a promnesic and anti-amnesic drug with no sedative-myorelaxing activity in rats. Therefore, this compd. might be of use for the specific treatment of cognitive impairments assocd. with the chronic use of benzodiazepines.

L41 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2003 ACS
AN 1997:438778 CAPLUS
DN 127:90461
TI Citicoline improves **memory** performance in elderly subjects
AU Alvarez, X. Anton; Laredo, Marta; Corzo, Dolores; Fernandez-Novoa, Lucia; Mouzo, Ricardo; Perea, J. Enrique; Daniele, Danilo; Cacabelos, Ramon
CS EuroEspes Biomedical Research Center, La Coruna, Spain
SO Methods and Findings in Experimental and Clinical Pharmacology (1997), 19(3), 201-210
CODEN: MFEPDX; ISSN: 0379-0355
PB Prous
DT Journal
LA English
AB Citicoline is a choline donor involved in the biosynthesis of brain phospholipids and acetylcholine extensively used in the treatment of neurodegenerative diseases. In this study we investigated the effects of the oral administration of citicoline alone (C1000: 1000 mg/day; C500: 500 mg/day) or in combination with nimodipine (C+Ni: 300 + 90 mg/day) during 4 wk on **memory** performance in elderly subjects with **memory** deficits and without dementia (N = 24; age = 66.12 .+-. 10.78 yr; MMS score = 31.69 .+-. 2.76). Results indicated that citicoline in comparison with placebo improves **memory** in free recall tasks, but not in recognition tests. A significant improvement in word recall (5.17 .+-. 1.1 vs. 3.95 .+-. 1.2 omissions; $p < 0.005$), immediate object recall (6.5 .+-. 1.6 vs. 5.5 .+-. 1.2 omission; $p < 0.05$) and delayed object recall (8.5 .+-. 2.1 vs. 6.7 .+-. 2.4 omissions; $p < 0.005$) was obsd. after citicoline treatment. Similar results were found in the three subgroups of treatment (8 subjects per group), suggesting that citicoline possesses **memory**-enhancing activity at doses of 300-1000 mg/day. A decrease in systolic blood pressure and minor changes in lymphocyte cell counting were also obsd. in old subjects after receiving citicoline. These effects are consistent with the vasoregulatory and neuroimmune actions of citicoline and suggest that this compd. may improve **memory** by acting on mechanisms of brain neurotropism and cerebrovascular regulation. According to the present results, showing that citicoline improves **memory** performance in elderly subjects, we concluded that this mol. is suitable for the treatment of **memory** deficits in old people.

L41 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2003 ACS

AN 1995:342645 CAPLUS
DN 122:122921
TI Participation of brain neurotransmission in the mechanism of action of CDP-choline
AU Petkov, V. D.; Hadjiivanova, Ch.; Kehayov, R.; Konstantinova, E.; Belcheva, S.
CS Institute Physiology, Bulgarian Academy Sciences, Sofia, 1113, Bulg.
SO Dokladi na Bulgarskata Akademiya na Naukite (1993), 46(9), 117-20
CODEN: DBANEH; ISSN: 0861-1459
PB Izdatelstvo na Bulgarskata Akademiya na Naukite
DT Journal
LA English
AB CCh (CDP-choline) is a potential neuropsychiatric drug. The effects of CCh on learning and **memory** were studied in relation to brain neurotransmitter receptors. CCh reduced the d. of serotoninergic S1 and .beta.-adrenergic receptors in the hippocampus. In shuttle-box expts. neither CCh nor a serotonergic S1 receptor agonist exerted any effect on learning or short-term **memory**. In step-down expts., CCh-improved learning was not affected by dopaminergic D2 or muscarinic M1 antagonists, but a nonselective muscarinic receptor antagonist completely prevented the learning- and **memory**-facilitating effect of CCh.

=> d his

(FILE 'HOME' ENTERED AT 11:35:25 ON 12 MAY 2003)

FILE 'REGISTRY' ENTERED AT 11:36:01 ON 12 MAY 2003
E CITICOLINE/CN
L1 1 S E3
E LINOLEIC ACID/CN
L2 1 S E3
E LINOLENIC ACID/CN
L3 1 S E3
E ARACHIDONIC ACID/CN
L4 1 S E3
E DOCSOHEXENOIC ACID/CN
E DOCOSOHEXENOIC ACID/CN
E DOCOSAHEXENOIC ACID/CN
E CYTIDINE/CN
L5 1 S E3
E URIDINE/CN
L6 1 S E3
E CHOLINE/CN
L7 1 S E3

FILE 'CA' ENTERED AT 11:41:03 ON 12 MAY 2003
L8 788 S L1
L9 28491 S L2
L10 14770 S L3
L11 25848 S L4
L12 3739 S L5
L13 5881 S L6
L14 10274 S L7
L15 793 S L8 OR CITICOLIN####
L16 113229 S L12 OR L13 OR L14 OR (CYTIDIN##### OR URIDIN###### OR CHOLIN#
L17 691 S L15 AND L16
L18 25 S L17 AND (MEMORY OR COGNITI#######)
L19 48597 S L9 OR L10 OR L11
L20 18 S L19 AND L15
L21 43 S L20 OR L18
L22 9 S L21 AND (AD OR ALZHEIMER####)

FILE 'CAPLUS' ENTERED AT 11:49:39 ON 12 MAY 2003

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L23          800 S L15
L24       114550 S L16
L25          694 S L23 AND L24
L26            0 S L25 (L) (THU OR PKT OR PAC OR BAC OR BPN)
L27           12 S L25 AND (AD OR ALZHEIMER####)
L28           12 S L22 OR L27
L29            3 S L27 NOT L22
L30           99 S L1/THU
L31            2 S L1/PKT
L32           21 S L1/PAC
L33           80 S L1/BAC
L34          103 S L32 OR L31 OR L30
L35          133 S L33 OR L34
L36           17 S L35 AND (AD OR MEMORY OR ALZHEIMER###)
L37           19 S L36 OR L22
L38           21 S L28 OR L22 OR L36
L39           12 S L38 NOT L22
L40            9 S L37 NOT L28
L41            9 S L40 NOT L22

=> s l22 or l40 or l41 or l28
         28526 L2
         14788 L3
         25880 L4
           788 L1
           103 CITICOLIN####
           788 L1
           103 CITICOLIN####
          3739 L5
          5884 L6
         10284 L7
         11556 CYTIDIN#####
         25890 URIDIN######
         81038 CHOLIN#####
         86971 MEMORY
         12485 COGNITI#######
         37414 AD
         25883 ALZHEIMER####
L42         21 L22 OR L40 OR L41 OR L28

=> file uspatfull, biosis,drugu,medline
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY     SESSION
FULL ESTIMATED COST                                       183.47      267.60

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)              SINCE FILE      TOTAL
                                                           ENTRY     SESSION
CA SUBSCRIBER PRICE                                        -7.81      -13.39

FILE 'USPATFULL' ENTERED AT 12:11:00 ON 12 MAY 2003
CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'BIOSIS' ENTERED AT 12:11:00 ON 12 MAY 2003
COPYRIGHT (C) 2003 BIOLOGICAL ABSTRACTS INC.(R)

FILE 'DRUGU' ENTERED AT 12:11:00 ON 12 MAY 2003
COPYRIGHT (C) 2003 THOMSON DERWENT

FILE 'MEDLINE' ENTERED AT 12:11:00 ON 12 MAY 2003

=> s l42
'BAC' IS NOT A VALID CROSSOVER QUALIFIER FOR
'BAC' IS NOT A VALID CROSSOVER QUALIFIER FOR
'BAC' IS NOT A VALID CROSSOVER QUALIFIER FOR
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'BAC' IS NOT A VALID CROSSOVER QUALIFIER FOR
Answer sets created in a different file may be field qualified with a limited set of qualifiers. Enter HELP CROSSOVER at an arrow prompt (=>) for specific information.

=> s l15
L43 1543 L15

=> s l43 and (AD or memory or alzheimer#### or cogniti###)
L44 280 L43 AND (AD OR MEMORY OR ALZHEIMER#### OR COGNITI###)

=>

=> s l44 and l16
L45 227 L44 AND L16

=> dup remove l45
PROCESSING COMPLETED FOR L45
L46 183 DUP REMOVE L45 (44 DUPLICATES REMOVED)

=> s l46 and citicolin######
L47 93 L46 AND CITICOLIN######

=> s l47 and (cytidin##### or uridin##### or cholin####)
L48 87 L47 AND (CYTIDIN##### OR URIDIN##### OR CHOLIN####)

=> s l48 and (l9 or l10 or l11)
L49 4 L48 AND (L9 OR L10 OR L11)

=> s l46 and (l9 or l10 or l11)
L50 6 L46 AND (L9 OR L10 OR L11)

=> d l50 1-6 bib,ab

L50 ANSWER 1 OF 6 USPATFULL
AN 2002:273412 USPATFULL
TI Therapeutic methods employing disulfide derivatives of dithiocarbamates and compositions useful therefor
IN Lai, Ching-San, Encinitas, CA, UNITED STATES
Vassilev, Vassil, San Diego, CA, UNITED STATES
PA Medinox, Inc. (U.S. corporation)
PI US 2002151540 A1 20021017
AI US 2002-44096 A1 20020111 (10)
RLI Division of Ser. No. US 2000-565665, filed on 5 May 2000, ABANDONED
DT Utility
FS APPLICATION
LREP Stephen E. Reiter, Foley & Lardner, P.O. Box 80278, San Diego, CA, 92138-0278
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 5 Drawing Page(s)
LN.CNT 2548
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a novel dithiocarbamamte disulfide dimer useful in various therapeutic treatments, either alone or in combination with other active agents. In one method, the disulfide derivative of a dithiocarbamate is coadministered with an agent that inactivates (or inhibits the production of) species that induce the expression of nitric oxide synthase to reduce the production of such species, while, at the same time reducing nitric oxide levels in the subject. In another embodiment, free iron ion levels are reduced in a subject by administration of a disulfide derivative of a dithiocarbamate(s) to scavenge free iron ions, for example, in subjects undergoing anthracycline chemotherapy. In another embodiment, cyanide levels are

reduced in a subject by administration of a disulfide derivative of a dithiocarbamate so as to bind cyanide in the subject. In a further aspect, the present invention relates to compositions and formulations useful in such therapeutic methods.

L50 ANSWER 2 OF 6 USPATFULL
AN 2001:202682 USPATFULL
TI Therapeutic methods employing disulfide derivatives of dithiocarbonates and compositions useful therefor
IN Lai, Ching-San, Encinitas, CA, United States
Vassilev, Vassil, San Diego, CA, United States
PA Medinox, Inc., San Diego, CA, United States (U.S. corporation)
PI US 6316502 B1 20011113
AI US 2000-565666 20000505 (9)
RLI Division of Ser. No. US 1998-103639, filed on 23 Jun 1998, now patented, Pat. No. US 6093743
DT Utility
FS GRANTED
EXNAM Primary Examiner: Weddington, Kevin E.
LREP Reiter, Stephen E.Foley & Lardner
CLMN Number of Claims: 14
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2591
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a novel dithiocarbamamte disulfide dimer useful in various therapeutic treatments, either alone or in combination with other active agents. In one method, the disulfide derivative of a dithiocarbamate is coadministered with an agent that inactivates (or inhibits the production of) species that induce the expression of nitric oxide synthase to reduce the production of such species, while, at the same time reducing nitric oxide levels in the subject. In another embodiment, free iron ion levels are reduced in a subject by administration of a disulfide derivative of a dithiocarbamate(s) to scavenge free iron ions, for example, in subjects undergoing anthracycline chemotherapy. In another embodiment, cyanide levels are reduced in a subject by administration of a disulfide derivative of a dithiocarbamate so as to bind cyanide in the subject. In a further aspect, the present invention relates to compositions and formulations useful in such therapeutic methods.

L50 ANSWER 3 OF 6 USPATFULL
AN 2001:90260 USPATFULL
TI Fatty acid-pharmaceutical agent conjugates
IN Webb, Nigel L., Bryn Mawr, PA, United States
Bradley, Matthews O., Laytonsville, MD, United States
Swindell, Charles S., Merion, PA, United States
Shashoua, Victor E., Brookline, MA, United States
PI US 2001002404 A1 20010531
AI US 2000-730450 A1 20001205 (9)
RLI Continuation of Ser. No. US 1996-651428, filed on 22 May 1996, ABANDONED
DT Utility
FS APPLICATION
LREP Edward R. Gates, Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA, 02210
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN 14 Drawing Page(s)
LN.CNT 2511
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides conjugates of fatty acids and pharmaceutical agents useful in treating noncentral nervous system conditions. Methods for selectively targeting pharmaceutical agents to desired tissues are provided.

L50 ANSWER 4 OF 6 USPATFULL
AN 2000:95042 USPATFULL
TI Therapeutic methods employing disulfide derivatives of dithiocarbamates and compositions useful therefor
IN Lai, Ching-San, Encinitas, CA, United States
Vassilev, Vassil, San Diego, CA, United States
PA Medinox Inc., San Diego, CA, United States (U.S. corporation)
PI US 6093743 20000725
AI US 1998-103639 19980623 (9)
DT Utility
FS Granted
EXNAM Primary Examiner: Weddington, Kevin E.
LREP Gary Cary Ware & Freidenrich, Reiter, Stephen E., Kirschenbaum, Shelia R.
CLMN Number of Claims: 51
ECL Exemplary Claim: 1
DRWN 11 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 2691
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a novel dithiocarbamate disulfide dimer useful in various therapeutic treatments, either alone or in combination with other active agents. In one method, the disulfide derivative of a dithiocarbamate is coadministered with an agent that inactivates (or inhibits the production of) species that induce the expression of nitric oxide synthase to reduce the production of such species, while, at the same time reducing nitric oxide levels in the subject. In another embodiment, free iron ion levels are reduced in a subject by administration of a disulfide derivative of a dithiocarbamate(s) to scavenge free iron ions, for example, in subjects undergoing anthracycline chemotherapy. In another embodiment, cyanide levels are reduced in a subject by administration of a disulfide derivative of a dithiocarbamate so as to bind cyanide in the subject. In a further aspect, the present invention relates to compositions and formulations useful in such therapeutic methods.

L50 ANSWER 5 OF 6 MEDLINE
AN 2001353974 MEDLINE
DN 21124625 PubMed ID: 11223016
TI Does CDP-**choline** modulate phospholipase activities after transient forebrain ischemia?.
AU Rao A M; Hatcher J F; Dempsey R J
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SO BRAIN RESEARCH, (2001 Mar 2) 893 (1-2) 268-72.
Journal code: 0045503. ISSN: 0006-8993.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200106
ED Entered STN: 20010625
Last Updated on STN: 20010625
Entered Medline: 20010621
AB Ten min forebrain ischemia/1-day reperfusion resulted in significant decreases in total phosphatidylcholine (PtdCho), phosphatidylinositol (PtdIns), and cardiolipin in gerbil hippocampus. CDP-**choline** restored cardiolipin levels, arachidonic acid content of PtdCho, partially but significantly restored total PtdCho, and had no effect on PtdIns. These data suggest that CDP-**choline** prevented the activation of phospholipase A(2) (rather than inhibiting phospholipase A(2) activity) but did not affect activities of PtdCho-phospholipases C and/or D, or phosphoinositide-phospholipase C. CDP-**choline** also provided

significant protection for hippocampal CA(1) neurons.

L50 ANSWER 6 OF 6 MEDLINE
AN 1998002141 MEDLINE
DN 98002141 PubMed ID: 9342734
TI Dietary alpha-linolenic acid increases the biosynthesis of the **choline** glycerophospholipids from [14C]CDPcholine in rat liver and kidney but not in brain.
AU Kim K S; Park E J; Lee C W; Joo H T; Yeo Y K
CS Lipid Chemistry Laboratory, Kyungpook National University, Taegu, Korea.
SO NEUROCHEMICAL RESEARCH, (1997 Oct) 22 (10) 1291-7.
Journal code: 7613461. ISSN: 0364-3190.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199801
ED Entered STN: 19980130
Last Updated on STN: 19980130
Entered Medline: 19980122
AB The effect of feeding rats for 30 days with diets containing high levels of linoleic acid (sunflower oil, SO) or alpha-linolenic acid (perilla oil, PO) was studied in the liver, kidney and brain. The PO group showed a higher labeling of **choline** glycerophospholipids (CGP) in liver and kidney but no difference with the SO group in ethanolamine glycerophospholipids (EGP) labeling. The brain displayed the lowest incorporation of both precursors and no difference between the two diets. Analyses of brain CGP and EGP fatty acid composition showed that in the PO group the ratio n-6/n-3 was lower than in the SO group, mainly as a consequence of lower levels of n-6 fatty acids. The mole % of docosahexaenoate (DHA) in these lipids was the same for both groups and only triacylglycerols (TAG) displayed a higher DHA. Therefore, at least in the brain, the magnitude of fatty acid changes observed in CGP and EGP for the PO group does not affect the uptake/incorporation of the precursors into phospholipids.